

UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

TO DEVELOP A PROJECT MANAGEMENT PLAN FOR A PROJECT TO
IMPROVE THE CAPACITY OF THE NATIONAL TRAINING AGENCY (NTA) AND
THE ANTIGUA AND BARBUDA INSTITUTE OF CONTINUING EDUCATION
(ABICE) TO ISSUE NATIONAL AND CARIBBEAN VOCATIONAL
QUALIFICATIONS

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This Final Graduation Project was approved by the University as partial fulfillment of the requirements to opt for the Master in Project Management (MPM) Degree

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DEDICATION

I dedicate this work to my son Vayden De Freitas and niece K'lysa Joseph for teaching me patience and always enquiring if I was almost finished. They were very interested in what I was doing and they contributed to my perseverance. We have all grown in the last year.

"Success isn't always about greatness. It's about consistency. Consistent hard work leads to success. Greatness will come." -*Dwayne "The Rock" Johnson*.

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I express my profound love and appreciation to my Lord Jesus Christ for His favour towards me particularly during this time.

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If it were not for my friend Nicole, I would not have enrolled in the Master's program. She sent me an email about the OAS scholarship, because she knew of my interest in project management.

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To my tutor, Fabio Muñoz Jiménez, thank you for your support and guidance with the development of the FGP. My tutor's expertise and knowledge were most valuable, which aided in the completion of the FGP.

ABSTRACT

This document develops a PMPlan for the ABNTA and ABICE for a project to improve their capacity to issue National, and Caribbean Vocational Qualifications. By implementing the PMPlan a structured, resourced training system, that promotes a culture of lifelong learning via continuous education and training will emerge in Antigua and Barbuda. Accordingly, the PMPlan establishes the operational framework within which the ABNTA and ABICE will conduct appropriate training courses to improve the quality of employment and learning for the citizens of Antigua and Barbuda.

Built on a robust methodological framework, the development of the FGP created a research process that measures the reliability and validity of the project's content. Thus, the results emanating from the FPG will enable the ABNTA and ABICE to provide essential education, training, and certification services in TVET that meet the developmental needs of the economy.

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ABBREVIATIONS AND ACRONYMS

A&B	Antigua and Barbuda
ABICE	Antigua and Barbuda Institute of Continuing Education
A&BMTDS	Antigua and Barbuda Medium Term Development Strategy
ABNTA	Antigua and Barbuda National Training Agency
ABNVQ	Antigua and Barbuda National Vocational Qualifications
CARICOM	CARICOM Community
CBET	Competency Based Education and Training
CSME	CARICOM Single Market and Economy
CVQ	Caribbean Vocational Qualifications
ECCB	Eastern Caribbean Central Bank
EU	European Union
EVA	Earned Value Analysis
EVM	Earned Value Management
FGP	Final Graduation Project
GDP	Gross Domestic Product
KPI's	Key Performance Indicators
NTA	National Training Agency
NVQ	National Vocational Qualifications
OPA	Organization Process Assets
PDM	Precedence Diagramming Model
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
PMPlan	Project Management Plan
PSC	Project Steering Committee
RACI	Responsible Accountable Consult and Inform
RAM	Responsibility Assignment Matrix
RBS	Risk Breakdown Structure
SIDS	Small Island Developing States

SMART	Specific, Measurable, Achievable, Results Oriented, and Time-bound
SOW	Statement of Works
SPI	Schedule Performance Index
SV	Standard Variance
SWOT	Strength, Weakness, Opportunities, Threats
TVET	Technical Vocational Education Training
UNESCO	United Nations Educational Scientific and Cultural Organization
UNHDI	United Nations Human Development Index
US	United States
WBS	Work Breakdown Structure
XCD	Eastern Caribbean Dollars

EXECUTIVE SUMMARY

Located in the Eastern Caribbean, Antigua and Barbuda estimated population is 97,000 persons. During the period 2015 – 2019, Antigua and Barbuda recorded an average growth rate of 4.98%, while in December 2019, the Eastern Caribbean Central Bank forecasted a growth rate of 6.75% for 2020. As a service economy, Antigua and Barbuda is heavily dependent on a skilled workforce to develop its industries. One of the main goals stated in the Antigua and Barbuda Medium Term Development Strategy (2016 -2020) is to improve the quality of life for all nationals. The Strategy recognized that education and training are critical factors determining Antigua and Barbuda's ability to sustain its competitiveness and secure a high level of human development.

Therefore, establishing a structured TVET program at the national level will assist with developing a highly skilled and competitive workforce. The complete integration of TVET in the national education system will fill the skills shortage gaps, acquire employable skills, and is a critical investment in the country's socio-economic advancement.

Thus, the FGP will develop a PMPlan for the project that will enable the ABNTA and ABICE to work together to issue NVQ's and CVQ's while advancing the national TVET framework. The PMPlan utilized the standard and principles established in the PMBOK to articulate a series of activities and actions that would achieve the objectives of the FGP. This approach will positively influence the organizational structure and values of the ABNTA and ABICE by addressing its capacity development constraints to fulfill its TVET training and certification mandates. It, therefore, enabled the organization to institute tested principles, procedures, and processes, which reinforces the strategic objectives of both organizations. As a result, over time, a highly trained, skilled, competitive, and motivated workforce will emerge in Antigua and Barbuda through the development of the PMPlan.

Thus, both organizations articulated mission and vision align with the organizations' legally established function as it relates to certification and training in TVET. Further, the elaboration of the FGP would aid in the fulfillment of its objectives while implementing actions, activities, and an adaptable mechanism to solve the problem addressed by the FGP. Therefore, both ABNTA and ABICE ability to execute their mandates is enhanced through the results of the FGP.

Further, the FGP advances the integration of transformative learning, which is the development of quality educational programmes that goes beyond teaching functional literacy skills. As a learning theory, transformative learning focuses on adult education and young adult learning. As shown in this FGP, this theory of learning applies to TVET in that it analyses the way people learn in a formal and non-formal setting. Additionally, incorporating the regenerative development principles, particularly the use of the resources into the development of the PMPlan, builds a holistic TVET ecosystem going beyond sustainability principles.

Consequently, the FGP aligns with the stated justification for developing a project based on the PMI standard management guidance. By integrating the

project management processes and the ten (10) knowledge areas, the inputs, tools, techniques, and outputs for each knowledge area formed the basis for developing the theoretical framework for the project.

The methodological framework took into account the categorization of information sources as primary, secondary, and tertiary. In this regard, the research methods used to develop the FGP included content analysis, interviews, and surveys. Therefore, the FGP followed applied research methods and principles, to solve the specific problem addressed by the project. Therefore, the methodological framework followed an approach that allowed for the application of the PMI standard practice guidelines for project management. Thus, the design and selection of the most compelling research method created a robust methodological framework of reliability and validity for the research content.

The project results positively influenced the organizational structure and values of the ABNTA and ABICE by addressing its capacity development constraints to fulfill its training and certification mandates. It provides for the implementation of standard practices and techniques through the implementation of the PMPlan that aids with achieving the objectives and deliverables. The Plan outlines several processes and procedures that will guide the project team in managing each phase of the project.

The beneficiary organizations benefit tremendously from the results of the project through the transfer of technology, improved documentation, and improved structure of the environment process assets and culture of the organization. Additionally, the quality assurance and criteria for the project improves the credibility of the training programme and the beneficiaries' capacity, technical competencies, and knowledge.

1. INTRODUCTION

1.1. Background

Located in the Eastern Caribbean, Antigua and Barbuda (A&B) estimated population is 97,000 persons. According to the Caribbean Development Bank (2019) during the period 2015 – 2019, A&B recorded an average growth rate of 4.98%, while in December 2019; the Eastern Caribbean Central Bank (ECCB) forecasted a growth rate of 6.75% for 2020. However, based on statistics obtained from the U.S. Department of State 2020 Investment Climate Statements, A&B recorded a growth rate of 3.4% in 2019. Accordingly, the ECCB projected that the real GDP could contract by 18.3% in 2020, relative to the 4.2% growth projected before the crisis.

Additionally, the latest United Nations Human Development Index 2020 Report (HDI), ranked A&B 78 out of 189 countries, putting the country in the high human development category. Consequently, the country enjoys a high standard of living, but the economy, like many Small Island Development States (SIDS) is vulnerable to international economic shocks, recession, and natural disasters, which potentially can reset the country's economic outlook.

As a service-based economy, A&B is heavily dependent on a skilled workforce to develop its industries. One of the main goals stated in A&B Medium Term Development Strategy (MTDS) 2016 -2020 is to improve the quality of life for

all Antiguan and Barbudans. The Strategy recognized that education and training are critical factors determining A&B's ability to sustain its competitiveness and secure a higher level of human development. Further, the Strategy articulates a series of actions that will better align education to meet the economy's needs. Therefore, access to education, and lifelong training through Technical Vocational Training (TVET)¹, are the necessary condition to achieve the education and training goals established in the MTDS.

Additionally, as a signatory to the Revised Treaty of Chaguaramas A&B, is also seeking to assist its citizens to access the regional market within the CARICOM Single Market and Economy (CSME)². Article 46³ of the Revised Treaty of Chaguaramas mandates the Member States to facilitate the movement of skills outlined in the Article, including successive decisions of the Conference of Heads of Government⁴. As such, Member States should establish national mechanisms to certify, establish equivalency of degrees, and for accrediting institutions. While

¹ Technical and vocational education and training' (TVET) is understood as comprising education, training and skills development relating to a wide range of occupational fields, production, services and livelihoods. TVET, as part of lifelong learning, can take place at secondary, post-secondary, and tertiary levels and includes work-based learning and continuing training and professional development, which may lead to qualifications. TVET also includes a wide range of skills development opportunities attuned to national and local contexts. Learning to learn, the development of literacy and numeracy skills, transversal skills and citizenship skills are integral components of TVET.

² A regime established by the provisions of the Revised Treaty of Charaguaramas for the economic, market integration of the countries of the Caribbean Community (CARICOM).

³ Persons eligible for movement: University graduates, media workers, sports persons, musicians, professional nurses, teachers, artisans, artistes, holders of degrees or equivalent qualifications, household domestics with CARICOM Vocational Qualifications or equivalent qualifications.

⁴ The Conference of Heads of Government is an organ of the Caribbean Community, which comprised all Heads of Government of Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Monserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname and Trinidad and Tobago.

some Member States have received approval to offer CVQ's⁵, others like A&B are still putting their national systems in place.

Globally recognized as a critical agent for economic development, establishing a structured TVET program at the national level will assist with developing a highly skilled and competitive workforce. The full integration of TVET into the national education system will therefore fill the skills shortage gaps, acquire employable skills, which is a critical investment in the country's socio-economic advancement. Therefore, the implementation of this project will assist A&B with to:

- Develop the workforce by improving the capacity of ABICE and ABNTA to issue NVQ's and CVQ's;
- Meet its regional obligations under the CSME to facilitate the movement of skilled Caribbean Community Nations;
- Strengthening the institutional and infrastructural capacity of ABICE and ABNTA; and
- Increase awareness of TVET nationally.

1.2. Statement of the Problem

An analysis of the national TVET environment through a SWOT articulated in the National Policy for Technical Vocational Education and Training (2017) as

⁵ The Caribbean Vocational Qualification (CVQ) is an award that represents achievement of a set of competencies which define core work practices of an Occupational area, consistent with the levels articulated within the regional qualifications framework

shown in Chart 1 identified several strengths, opportunities, and constraints that affect the development of TVET at the national level.

Chart 1

SWOT Analysis of the TVET Sector in Antigua and Barbuda

Strengths	Weaknesses
<ul style="list-style-type: none"> • Willingness to move TVET forward • Competent instructors • Strong professional organizations • Diverse area (skills) • Gender equality • Inclusion in the traditional system • Caters to diverse learners • Expand offerings in the TVET system 	<ul style="list-style-type: none"> • Inadequate resources (financial, human) • Lack of certification opportunities • Inadequate marketing of TVET • Absence of higher-level TVET institutions • Absence of qualifications framework • Insufficient labor market information • Insufficient collaboration and partnership • Absence of a national apprenticeship system • Inadequate/outdated legislation • Lack of quality in TVET system
Opportunities	Threats
<ul style="list-style-type: none"> • The regional thrust towards TVET • Mobility of workers (CSME) • Global perception of TVET • Emerging industries (green energy) • A large pool of uncertified workers 	<ul style="list-style-type: none"> • The influx of certified workers coming for available jobs • Perception of citizens about migrating • Political interference • Absence of political will/continuity • Stigmatized (education) system • Splintered regulatory framework

Note. Reprinted from *Antigua and Barbuda National Policy for Technical Vocational Education and Training (2017, p.20)*.

The analysis shows that the transformation of the national TVET system in A&B can only achieve the goals of aligning the education system with its economic development thrust by addressing the organizational deficiencies of the ABNTA and ABICE.

The ABNTA and ABICE are yet to issue a NVQ or CVQ. Therefore, to execute their respective mandates the challenges affecting the national TVET environment based on the SWOT requires establishing a competency-based training system. To create an adaptable, skilled, and competitive workforce, the ABNTA and ABICE must work collectively. Consequently, the institutional and infrastructural requirements to develop a highly certified workforce that will contribute to the industry and national development are required considering the weaknesses stated in the SWOT analysis.

Therefore, the FGP will develop a PMPlan for the project that will enable the ABNTA and ABICE to work together to issue NVQ's and CVQ's while advancing the national TVET framework. The PMPlan will utilize the standard and principles established in the PMBOK to articulate a series of activities and actions that would achieve the objectives of the FGP. This approach will influence the organizational structure and values of the ABNTA and ABICE to address its capacity development constraints to fulfill its training and certification mandates. It will enable the organization to institute tested principles, procedures, and processes, which reinforces the strategic objectives of both organizations.

1.3. Purpose








The advancement in technology and the modernization of the workplace due mainly to increase global competition has created a demand for a skilled and adaptable workforce. To this end, the Government of Antigua and Barbuda has recognized the need to enhance the human resources capacity of the country by improving the quality of skilled labour. The shortage of skills in key areas of the economy continues to affect its economic development, and ability to respond to the labour market demands at various levels of society. The labour market gaps results from not having a well-resourced training system that can adequately respond to demands at the secondary, tertiary, and vocational levels.

Thus, the FGP will streamline, and establish an operational framework whereby the ABNTA and ABICE can work together to promote, coordinate, and manage the technical vocational training system. The elements articulated in the PMPlan through the development of the FGP will ensure an adequate supply of trained employees for national development in areas relating to the training needs, and other regional commitments through the implementation of the CSME.

Additionally, the resources provided under this project will assist in closing an existing developmental gap, which has constrained the labour force and hindered the mobility of workers from capitalizing on employment opportunities at the national and regional levels. Within a competitive marketplace, there is an increasing demand for expertise, and a high-quality workforce in various fields

increases the availability of professional skills in the market. Therefore, the development of the FGP aims to develop the TVET programme as an essential strategy to promote economic growth, expand the labour market, and improve the quality of employment.

Therefore, the benefits of this project to the citizens of Antigua and Barbuda are:

-  Improved and upgraded education and training facilities;
-  Deliver quality education and training;
-  Improve the awareness of TVET among the national population;
-  Conduct vocational training assessments;
-  Issue NVQs and CVQs in targeted areas;
-  Improve the governance structures of the ABNTA and ABICE; and
-  Create an environment of long-life learning.

Accordingly, the PMPlan establishes the operational framework within which the ABNTA and ABICE will conduct appropriate training courses and programmes that will improve the quality of employment and learning for the citizens of Antigua and Barbuda. Consequently, the PMPlan will cultivate and promote a culture for the advancement in TVET that is in line with the national development priorities by incorporating standard management principles and processes. Thus, the project will develop an effectively coordinated and harmonized national TVET system

capable of producing and certifying quality skilled human resources, while contributing to the economy's prosperity.

As a result, a highly trained, skilled, competitive, and motivated workforce will emerge in Antigua and Barbuda through the development of PMPlan to deliver a training system that promotes a culture of lifelong learning via continuous education and training. The certification of individuals as instructors, assessors, verifiers - internal and external to deliver CBET instruction provides the impetus for the growth and development of TVET at the national level.

1.4. General objective

To develop a Project Management Plan for the Antigua and Barbuda National Training Agency and the Antigua and Barbuda Institute of Continuing Education for a project to improve their capacity to issue National and Caribbean Vocational Qualifications.

1.5. Specific objectives

- 1.5.1 To create a Scope Management Plan to ensure the inclusion of all work necessary for the completion of the project.
- 1.5.2 To create a Schedule Management Plan for the on-time execution of the project within the established timeframe.
- 1.5.3 To create a Cost Management Plan to define the process for the budget's development, and approval.

- 1.5.4 To create a Quality Management Plan to identify and include the quality requirements to meet stakeholders' expectations.
- 1.5.5 To create a Resource Management Plan to identify, acquire, and manage all resources needed to complete the project.
- 1.5.6 To create a Communication Management Plan for the effective communication of the project status to sponsor and stakeholders.
- 1.5.7 To create a Risk Management Plan to identify, evaluate project risks, and develop risk response, and mitigating measures.
- 1.5.8 To create a Stakeholder Management Plan to identify key project stakeholders and engagement mechanisms.
- 1.5.9 To create a Procurement Management Plan to obtain the products and services necessary for the execution of the project.

2. THEORETICAL FRAMEWORK

2.1 Company/Enterprise framework

2.1.1 Company/Enterprise background

The ABNTA and ABICE are the two main agencies in the National TVET system. According to the National Training Agency Act, 2008 No.8 of 2008 (p.7), the objectives of the ABNTA is “to establish, promote, and maintain national occupational standards, establish an awarding body for national vocational qualifications and facilitate the implementation of the modern apprenticeship the ABNVQ’s”. Based on NTA Act, the functions conferred on the organization include the following:

- i. To promote and coordinate technical and vocational training;
- ii. Develop and maintain a national training policy;
- iii. Advice on matters related to technical vocational education and training;
- iv. Manage a national technical and vocational training system to ensure an adequate supply of trained employees for national development;
- v. Maintain, operate and regulate a system of apprenticeship and traineeship;
- vi. Establish and maintain standards in technical vocational education and training;
- vii. Ensure that appropriate courses, syllabi, schedules, and programmes are available in technical or vocational training centers; and
- viii. Develop and maintain a register of national training facilities, resources, and directory of occupations.

ABICE caters to persons sixteen (16) years and older who are desirous of pursuing a skills trade. According to the Antigua and Barbuda Institute of Continuing Education Act, 2008 No. 10 of 2008, the functions of the Institute includes:

- i. Administer an educational institution to foster the achievement of excellence in studying in the fields of adult and continuing education, particularly technical and vocational education;
- ii. Provide courses and programmes for education and training and the use of facilities and resources of the institute;
- iii. To advance and develop knowledge and skills in the fields of technical vocational education; and
- iv. To confer awards to persons who have completed courses of studies at the institute.

The ABNTA and ABICE work together with the understanding that one is the training arm and the other is responsible for certification. To this end, the ABNTA sets the standards for various NVQ's and CVQs delivered by ABICE. Therefore, the ABNTA cannot function nor complete its mandate without the direct involvement of ABICE.

2.1.2 Mission and vision statements

According to the ABNTA Work Plan (2020), the mission and vision of the agency are to:

Mission

To develop a qualified workforce that supports industry and national development a competency-based education and training system universally recognized.

Vision

An Antiguan and Barbudan workforce that is certified, competent, productive, enterprising, and innovative, contributing to social and economic development.

According to the Antigua and Barbuda Business Plan for Budget Estimates 2020 (2020, p. 168), the mission and vision of ABICE are to:

Mission

Provide quality educational opportunities for individuals from diverse backgrounds and ability levels to enable them to acquire the knowledge and skills for sustained employment or pursuit of further education.

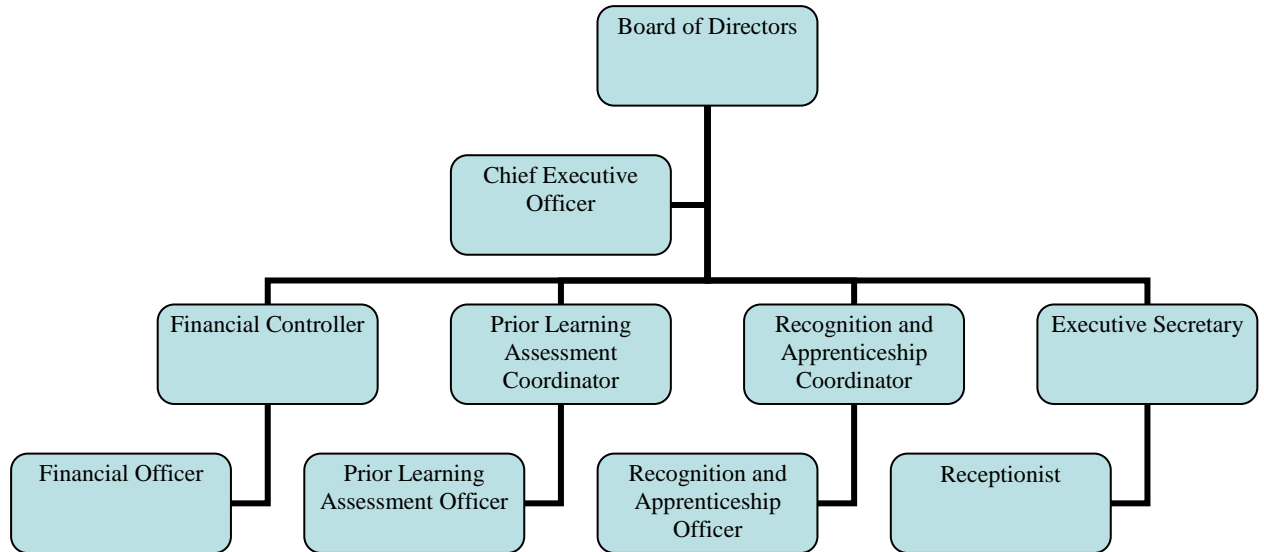
Vision

ABICE will provide high-quality learning opportunities for individuals from diverse backgrounds and abilities. We are committed to facilitating personal and national economic development and income generation.

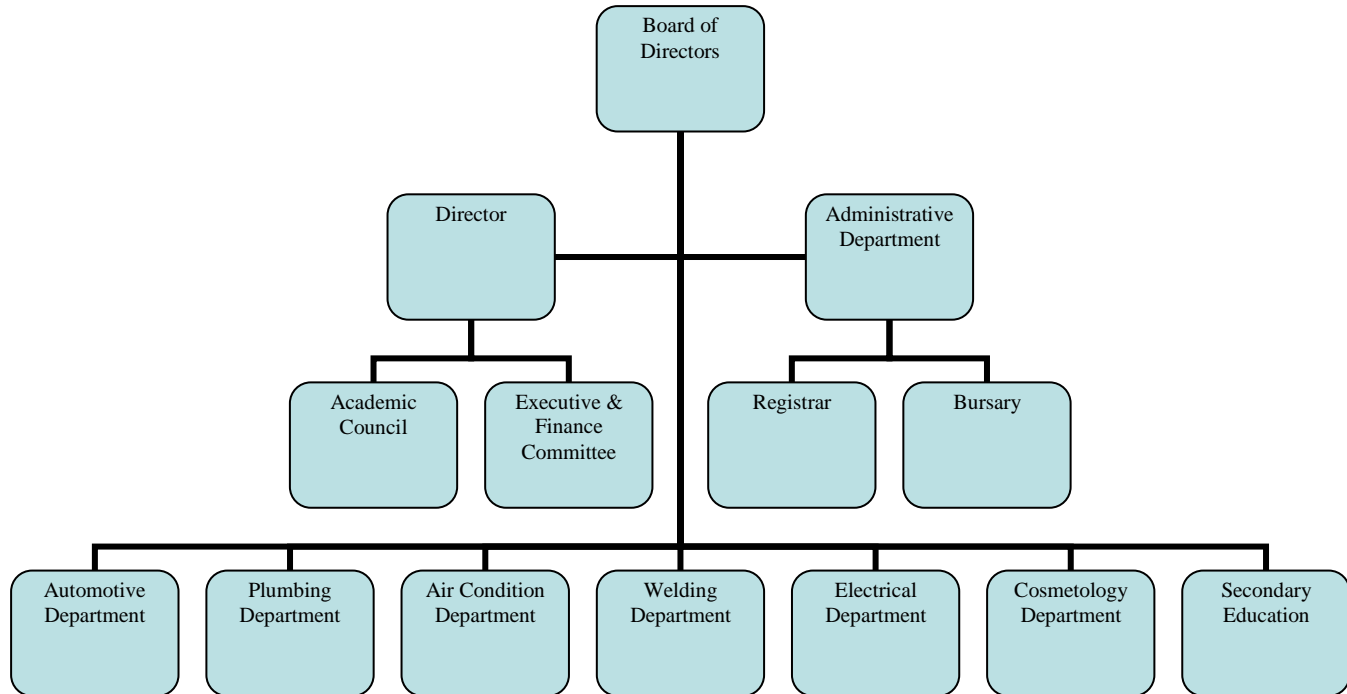
Thus, both organizations articulated vision and mission align with the legally established function as it relates to certification and training in TVET. Further, the elaboration of the FGP would aid in developing implementable actions, activities, and an adaptable mechanism to solve the problem addressed by the FGP. Therefore, the ABNTA and ABICE would enhance capabilities to execute their mandates and advance the national TVET system.

2.1.3 Organizational structure

The organizational structure of both organizations follows their respective legislative mandates, with the establishment of a Board and Executive Officer. The legislation of both organizations gives the Board power to appoint appropriate personnel to fulfill the portfolio mandate of the organizations. Figures 1 & 2 provide an overview of the organizational structure for the ABNTA and ABICE.

Figure 1*Organizational Chart for ABNTA*

Note. Provided by the Antigua and Barbuda National Training Agency (2021)

Figure 2*Organizational Structure of ABICE*

Note. Provided by the Antigua and Barbuda Institute of Continuing Education (2021)

2.1.4 Products offered

Both the ABNTA and ABICE are body corporate educational institutes.

ABICE provides training in several areas such as automotive, plumbing, carpentry, welding, electrical, drafting, and air conditioning. The Institute offers short courses in areas such as cake design and making, soap making, and business support courses.

The ABNTA certifies training centers, sets occupational standards, implements life-long learning programs, and develop training programs.

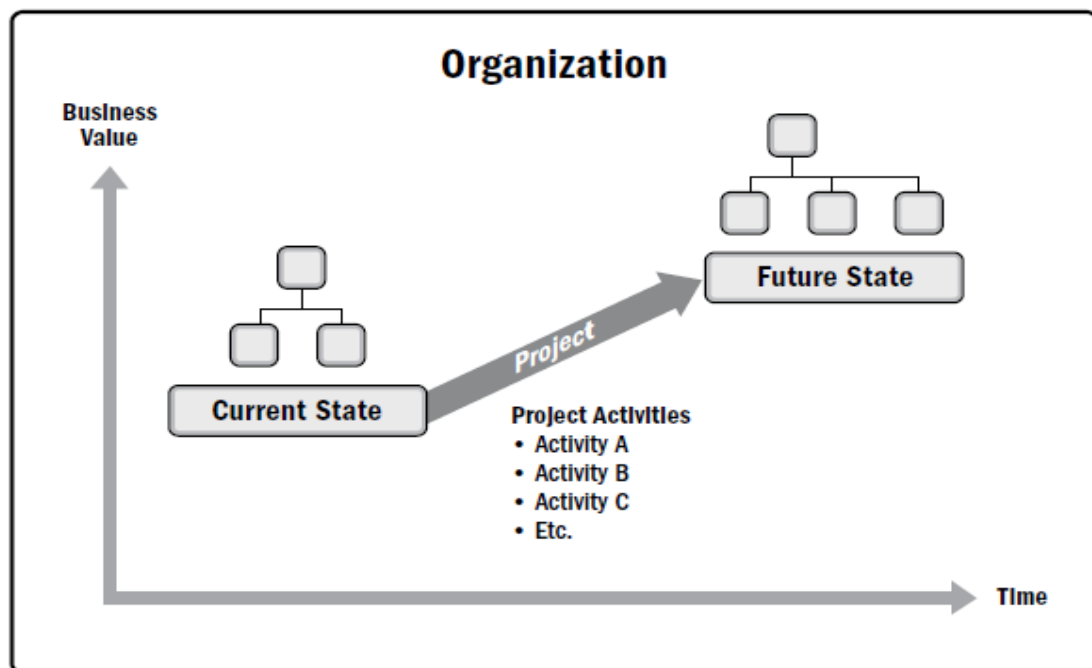
2.2 Project Management concepts

2.2.1 Project

The PMI (2017, p.4) defines a project as a “temporary endeavor undertaken to create a unique product, service or result”. Additionally, the initiation of a project is either to address a problem, consumer request, social need, or market demand (PMI, 2017, p. 546). Thus, a project achieves the desired objective, which brings about change within an organization. As stated in Figure 3, “a project is aimed at moving an organization from one state to another” (PMI, 2017, p.6).

Figure 3

Organizational State Transition via a Project



Source. Adopted from A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*), *Sixth Edition*, by the Project Management Institute. (2017, p.6).

Despite being a temporary endeavor, the impact of a project's deliverables goes beyond the project's lifecycle, having social, economic, and human development influences.

Therefore, the scope of the FGP to develop a PMPlan for the project is to improve the ABNTA and ABICE to issue NVQ's and CVQs. The development of the FGP accounts for the stated justification for developing a project based on the PMBOK standard management guidance.

2.2.2 Project management

Project management, according to PMI (2017, p. 10), is the “application of knowledge, skills, tools, and techniques to meet the project requirements”. The FGP advances the integration of the project management processes and the ten (10) knowledge areas. Therefore, the standard for project management includes:

- i. Identifying project requirements
- ii. Managing resources
- iii. Addressing the various needs, concerns, and expectations of stakeholders, establishing and maintaining active communication with stakeholders. (PMI, 2017 p. 542).

Thus, the management of projects takes account of and balances the triple constraints of schedule, cost, and quality. In so doing, the direction of a project should also consider other project-related issues of scope, risks, resources, stakeholder engagements, and requirements. Therefore, effective project management to which this FGP relates will enable both organizations to meet their objectives, resolve their capacity gaps and problems, and engender strategic changes.

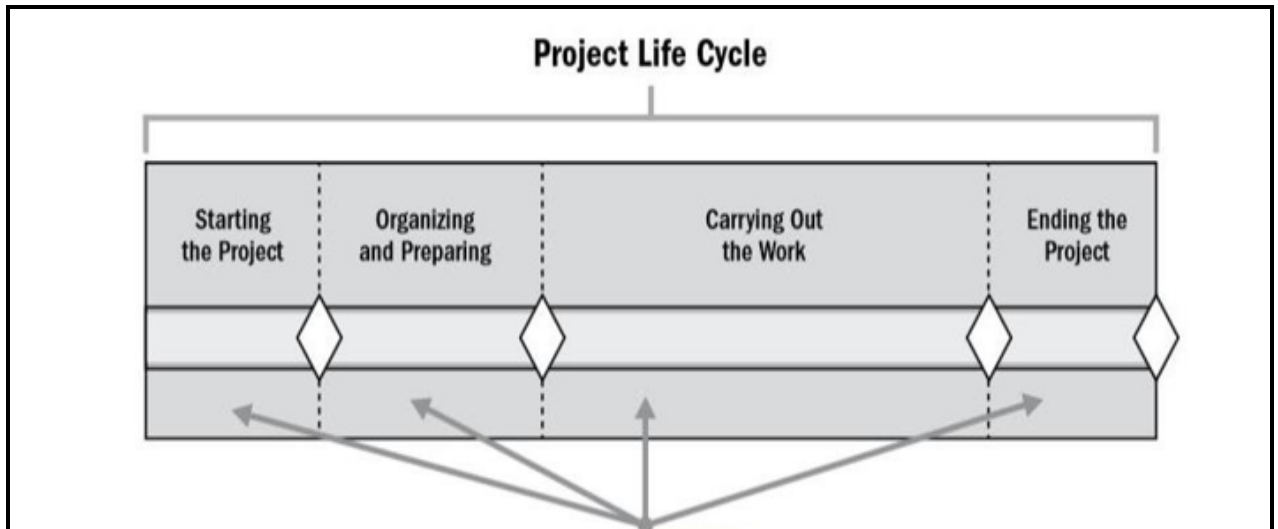
Additionally, ABNTA and ABICE have no formal project management structure. Thus, the FGP will provide best practice solutions towards the design and implementation of an agile project management structure that would benefit both organizations with the implementation and management of the project. Having an efficient management structure prevents poor project deliverables.

2.2.3 Project life cycle

“A project life cycle is a series of phases that a project passes through from start to completion, which is a collection of logically related project activities that culminates in the completion of one or more deliverables” (PMI, 2017 p. 547). Generally, the primary project life cycle structure based on PMI (2017 p. 548) includes starting the project, organizing and preparing, carrying out the work, and closing the project see Figure 4 below.

Figure 4

Generic Depiction of Project Life Cycle



Source. Adopted from A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*), *Sixth Edition*, by the Project Management Institute. (2017, p.548).

Thus, the project life cycle phases based on PMI (2017, p.190) may be sequential, iterative, or overlapping. Critical to developing of a project life cycle is to understand the organization's structure, services, and industry demand. The development of a project life cycle must be adaptable, which must take into account:

- i. Identifying the process or processes to be performed in each phase;
- ii. Performing the process or processes identified in the appropriate phase;
- and
- iii. Adjusting the various attributes of the phase (e.g. name, duration, exit criteria, entry criteria) (PMI, 2017 p. 19).

The ABNTA and ABICE do not have an established or documented project life cycle, as most of the projects previously implemented followed the rules and procedures external to the organization. Consequently, the ABNTA and ABICE would typically follow the life cycle established by the organization. However, the experience gained from these projects has created an organizational repository of information that can benefit the implementation of future projects.

Additionally, a project usually commences with a concept emanating from a market, human or social need. A project does not advance from a concept phase without an approved budgetary commitment or sponsor and the requirements known or approved.

2.2.4 Project Management Processes

According to PMI (2017, p.22), the project life cycle is managed by executing a series of project management activities known as a project management process. During the project management process, specific tested tools and techniques will achieve the project's deliverables. The output of one process generally becomes the input to another phase. Based on the needs of the project, several processes follow the following principles:

- i. Processes used once or at a predetermined point in the project;
- ii. Processes performed periodically as needed; and

- iii. Processes performed continuously throughout the project.

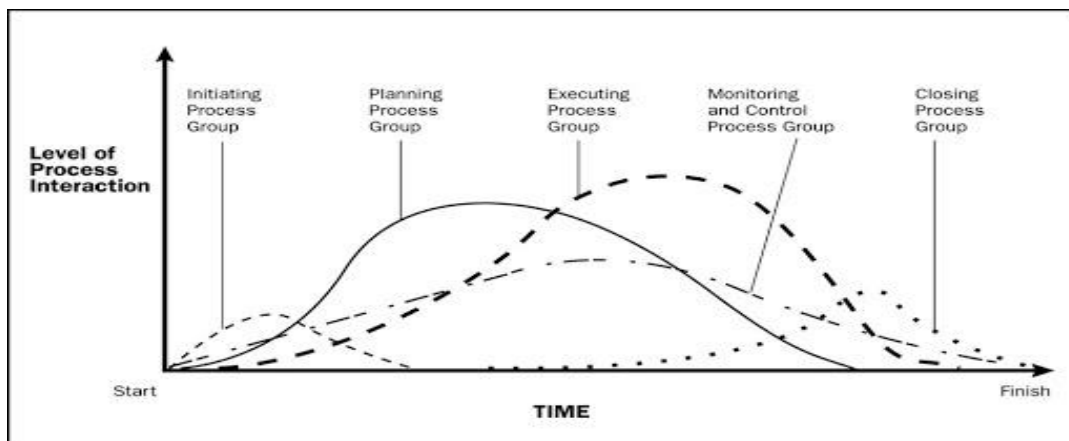
Therefore, the project management processes described by PMI (2017) includes the following:

- i. Initiating process group – develop a project charter, identify stakeholders, define the project, and project authorization.
- ii. Planning process group – full scope of the project.
- iii. Executing process group – managing resources, stakeholder engagements.
- iv. Monitoring and controlling process group – track, review performance progress, performance measurement, identify change.
- v. Closing process group – formally close project objectives and deliverables.

Figure 5 illustrates the interconnected nature of the project's process groups:

Figure 5

Example of Process group interactions within a project or phase



Source. Adopted from A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*), *Sixth Edition*, by the Project Management Institute. (2017, p.555).

The ABNTA and ABICE do not ascribe to these formal templates. The development of the FGP will aid in the integration of these valuable processes in their organizational structure.

2.2.5 Project Management Knowledge Areas

Along with the project process groups, the ten (10) knowledge areas are interrelated. Based on the PMI standard, the knowledge areas cover forty-nine processes, defining specific inputs, tools, techniques, and outputs for effective management the project.

The ABNTA and ABICE do not formally subscribe to an ordered sequential approach for project management. However, integrated into the structure of both organizations are the principles and standards relating to the planning, execution, and closure of a project. Therefore, the FGP will develop new knowledge and competencies for the organizations in developing, and executing of projects along with the stated knowledge areas.

2.2.6 Project Integration Management

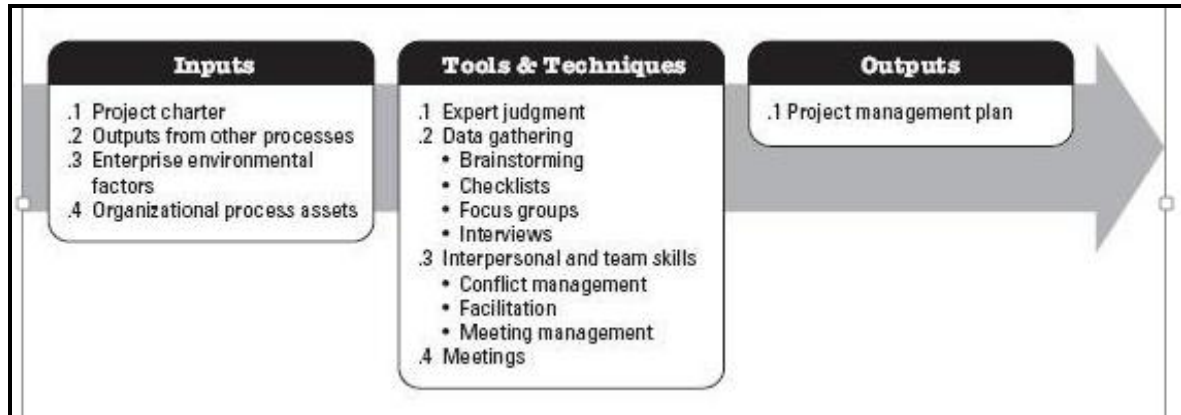
According to PMI (2017, p. 69), this knowledge area includes the “processes and activities to identify, define, combine, unify and coordinate the various processes and project management activities within the Project Management Process Groups.” Accordingly, this knowledge area covers the following management processes based on the PMI (2017):

- **Develop Project Charter** – formally authorizes the start of the project.
- **Develop Project Management Plan** – defining, preparing, and coordinating all plan components integrated into an integrated Project Management Plan. The benefit of this process, according to PMI (2017, p.82), “is the production of a comprehensive document that defines the basis of all project work and how the work will be performed”.

Thus, the development of the FGP will enable the ABNTA and ABICE to follow a sequential, logical, and comprehensive framework, to direct, execute, monitor, and close the project ensuring the achievement of project deliverables and objectives. See Figure 6, which shows the tools and techniques related to this process.

Figure 6

Develop Project Management Plan: Inputs, Tools & Techniques, and Outputs



Source. Adopted from A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*), *Sixth Edition*, by the Project Management Institute. (2017, p.82).

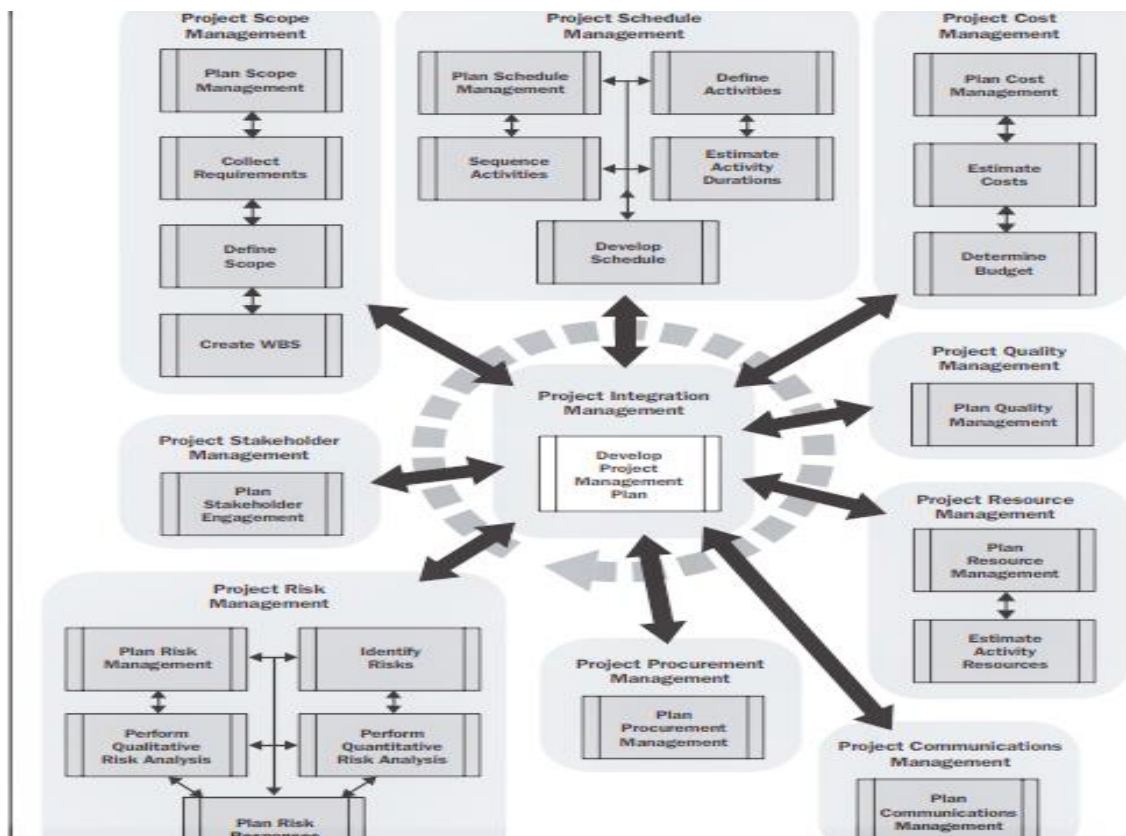
- **Direct and Manage Project Work** – is the process of performing the actual work stipulated in the Project Management Plan.
- **Manage Project Knowledge** – using existing and new project knowledge to achieve the project objectives.
- **Monitor and Control Project Work** – the process of tracking and reporting project progress and performance.
- **Perform Integrated Change Control** – this is the process of reviewing changes, approving changes, managing the changes to deliverables, and communicating the decisions.

- **Close Project or Phase** – finalizing and closing the project.

Therefore, illustrated in Figure 7 is an integrated standard approach of the project knowledge areas. It provides for the comprehensive integration and interrelation of the knowledge areas as vital aspects of the development of the Project Management Plan.

Figure 7

Integration of the knowledge areas in the project management plan



Source. Adopted from A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*), Sixth Edition, by the Project Management Institute. (2017, p.566).

2.2.7 Project Scope Management

This knowledge area involves setting the project boundaries and ensuring only the work required for the successful completion of the project are included in the project scope. Changes can occur at any point in time, and it is important to monitor and control scope since changes can alter the project's outcome. The six processes included in this area, based on the PMI (2017, p.129):

- **Plan Scope Management** – this plan outlines how to define, validate, and control the project scope. According to (PMI, 2017, p. 134), “this is a process that is performed once or at predefined points in the project, which provide focused guidance on how the scope will be managed”. Shown in Figure 8 are the inputs, tools, techniques, and outputs expected for this process.

Figure 8

Plan Scope Management: Inputs, Tools & Techniques, and Outputs



Source. Adopted from A Guide to the Project Management Body of Knowledge, (PMBOK® Guide), Sixth Edition, by the Project Management Institute. (2017, p.134).

The benefit of this knowledge area to the FPG will create several Organizational Process Assets (OPAs), including plans, policies, procedures, and knowledge that will establish valuable documented experiences and expertise for the execution and development of future projects.

- **Collect Requirements** – the process of determining, documenting, and managing stakeholder needs and requirements.
- **Define Scope** – the development of a detailed description of the project.
- **Create WBS** – the subdivision of project deliverables into smaller manageable work packages.
- **Validate Scope** – formalizing the acceptance of the completed project deliverables.
- **Control Scope** – monitoring the status of the project scope and managing changes to the scope baseline.

2.2.8 Project Schedule Management

Project Schedule Management is a process, which refers to the time required to complete each task related to the project's objectives. Performed during the planning, monitoring, and controlling process groups, this knowledge area is an

integral aspect of developing the PMPlan. Thus, the skills required for this knowledge area aids in analyzing and measuring of the time required for the completion of the project. The six processes in project schedule management, based on PMI (2017, p. 173) includes:

Plan Schedule Management – establishing the policies, procedures, and documentation for planning, developing, managing, executing, and controlling the project schedule. Shown in Figure 9 is the integration of the inputs, tools, techniques, and outputs for this knowledge area.

Figure 9

Plan Schedule Management: Input, Tools & Techniques, and Outputs



Source. Adopted from A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*), *Sixth Edition*, by the Project Management Institute. (2017, p.179).

- **Define Activities** – identifying and documenting the specific actions performed to produce the project deliverables.

- **Sequence Activities** – identifying and documenting relationships among project activities.
- **Estimate Activity Duration** – estimating the number of work periods needed to complete the individual activities with estimated resources.
- **Develop Schedule** – the process of analyzing activity sequences, durations, resource requirements, and schedule constraints to create the project schedule.
- **Control Schedule** – the process of monitoring the status of the project to update the project schedule and manage changes to the schedule baselines.

Thus, the FGP enables the development of the leads and lags technique, which refers to advancement and delays with the project schedule. This technique further allows for the scheduling of identifying lead times and scheduling activities.

Additionally, according to PMI (2017) scheduling comparison technique accelerates or shortens the project schedule without reducing the project scope.

Equally, data analysis techniques such as the schedule variance (SV), trend analysis, and the schedule performance index (SPI) is used to determine, and assess the variation of the project from the schedule baseline, including the cost

and scope of the project. Therefore, the technical analysis from this process controls the schedule of the project.

2.2.9 Project Cost Management

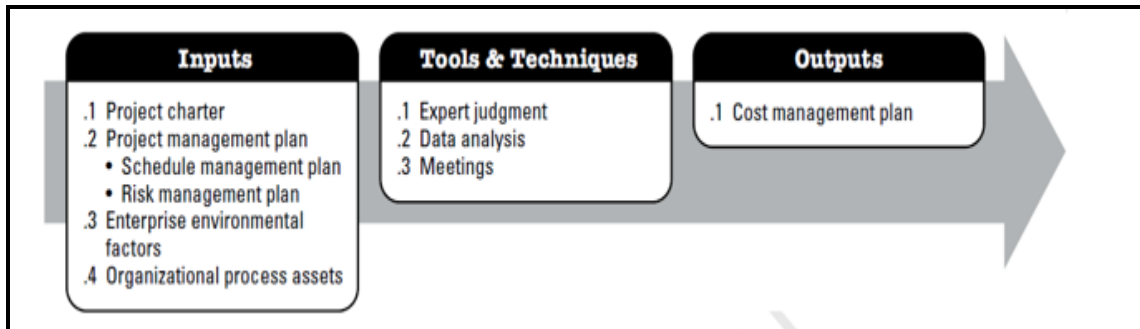
Project Cost Management is a process that “is concerned with planning and controlling the project’s budget. This process includes activities such as planning, budgeting, estimating, financing, funding, managing, and monitoring costs to make sure that the project finishes within the scheduled budget” (PMI, 2017, p. 231). Essentially, this process includes all of the related project financial requirements needed to execute and achieve the project deliverables.

The Project Cost Management Process defined in PMI (2017, p. 231) includes the following:

- **Plan Cost Management** – this process defines the project costs, including the estimation, budgeting, managing, and monitoring of project-related costs. Performed at a particular point in the project, this knowledge area establishes the procedures, and policies appropriate for estimating the costs. Therefore, Figure10 shows the inputs, tools, techniques, and outputs related to this process.

Figure 10

Plan Cost Management: Inputs, Tools & Techniques, and Outputs



Source. Adopted from A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*), *Sixth Edition*, by the Project Management Institute. (2017, p.235).

- **Estimate Costs** – the process of developing an approximation of the monetary resources needed to complete the work.
- **Determine Budget** – the process of aggregating the estimated costs of individual activities or work packages.
- **Control Costs** – the process of monitoring the project’s cost, including changes to the cost baseline.

Thus, the Earned Value Analysis (EVA), which compares the actual schedule and cost performance, incorporates the cost, scope, and schedule baselines to establish the performance baselines, is an essential element in developing the Cost Management Plan for the project. This approach is valuable to the project

performance framework to track and monitor its overall performance relative to scope, cost, and schedule constraints.

2.2.10 Project Quality Management

As a continuous improvement process, Project Quality Management includes the “processes for incorporating the organization’s quality policy regarding planning, managing, and controlling project and product quality requirements to meet stakeholders’ objectives” (PMI, 2017 p. 271). Project Quality Management is a significant aspect of achieving consumer satisfaction and the desired technical specifications of the project.

Importantly, project quality related to the FGP requires the implementation of certified TVET standards and international labour professional qualifications. The TVET certifications integrate the established standards of the instructor, assessor, and the training center.

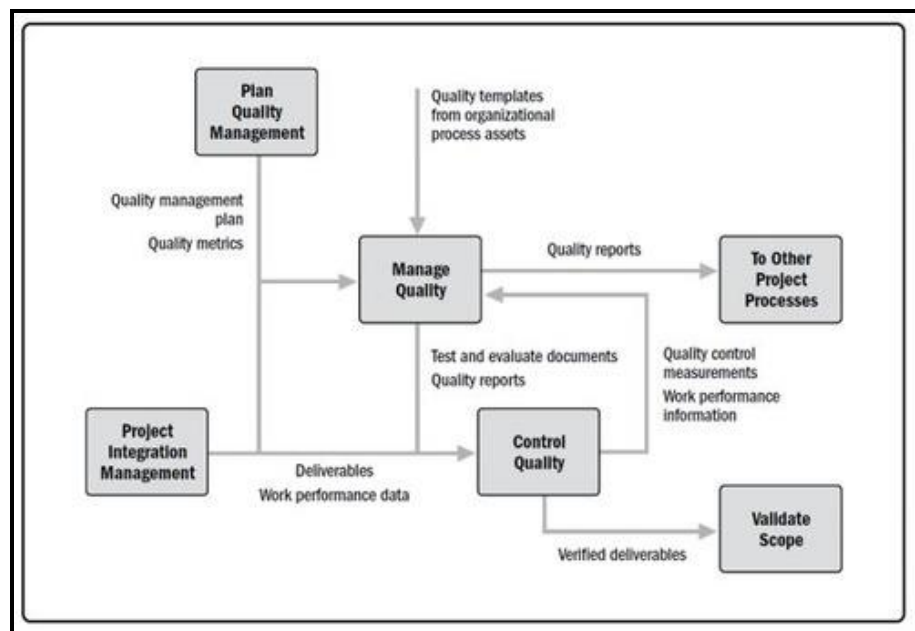
Thus, the processes related to this knowledge area follow the standard established in PMI (2017), as follows:

- **Plan Quality Management** – the process of identifying quality requirements and or standards for the project deliverables.

- **Manage Quality** –translating the quality management plan into executable quality activities that incorporates the organization’s quality policies into the project.
- **Control Quality** – the process of monitoring and recording the results of executing the quality management activities to assess performance and ensure the project outputs are complete, correct, and meet consumer expectations. Shown in Figure 11 is the integration of the processes to the development of the quality management framework.

Figure 11

Major Project Quality Management Process Interrelations



Source. Adopted from A Guide to the Project Management Body of Knowledge, (PMBOK® Guide), Sixth Edition, by the Project Management Institute. (2017, p. 273).

Implicit in this knowledge area as part of the data presentation and analysis is the cost of quality (COQ), which includes:

- Prevention cost - preventing poor quality.
- Appraisal cost – evaluating and measuring quality as it relates to project deliverables.
- Failure cost – the cost associated with non-conformance of deliverables.

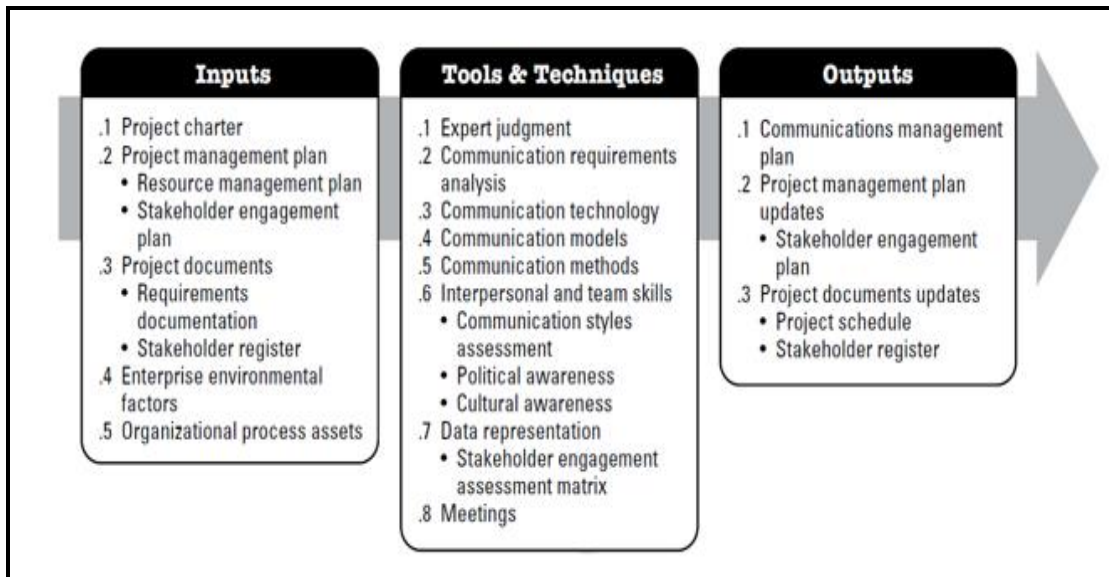
2.2.11 Project Resource Management

Based on the standard established in the PMI (2017, p. 307), “Project Resource Management includes the process to identify, acquire, and manage the resources needed to complete the project”. This knowledge area assigns the right project resources to all activities. The Project Resources Management processes include the following as defined by PMI (2017):

- **Plan Resource Management** – the process of defining, estimating, managing, and utilizing the project’s physical resources. This process takes account of the necessary project resources, which takes into account the project costs, schedule, risk, and quality. Figure 12 below shows the integrated tools and techniques of this process.

Figure 12

Plan Resource Management: Inputs, Tools and Techniques, and Outputs



Source. Adopted from A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*), *Sixth Edition*, by the Project Management Institute. (2017, p. 213).

- **Estimate Activity Resources** – the process of estimating team resources and the type and quantities of material, equipment, and supplies necessary to perform work.
- **Acquire Resources** – the process of obtaining team members, facilities, equipment, materials, supplies, and other resources necessary to complete the work.

- **Develop Team** – the process of improving competencies, team member interaction, and the overall team environment to enhance project performance.
- **Manage Team** – this is the process of tracking team member performance, providing feedback, resolving issues, and managing team changes to optimize project performance.
- **Control Resources** – this is the process of ensuring that the physical resources assigned and allocated to the project are available as intended, as well as monitoring the planned versus actual use of resources and performing corrective action as necessary.

2.2.12 Project Communication Management

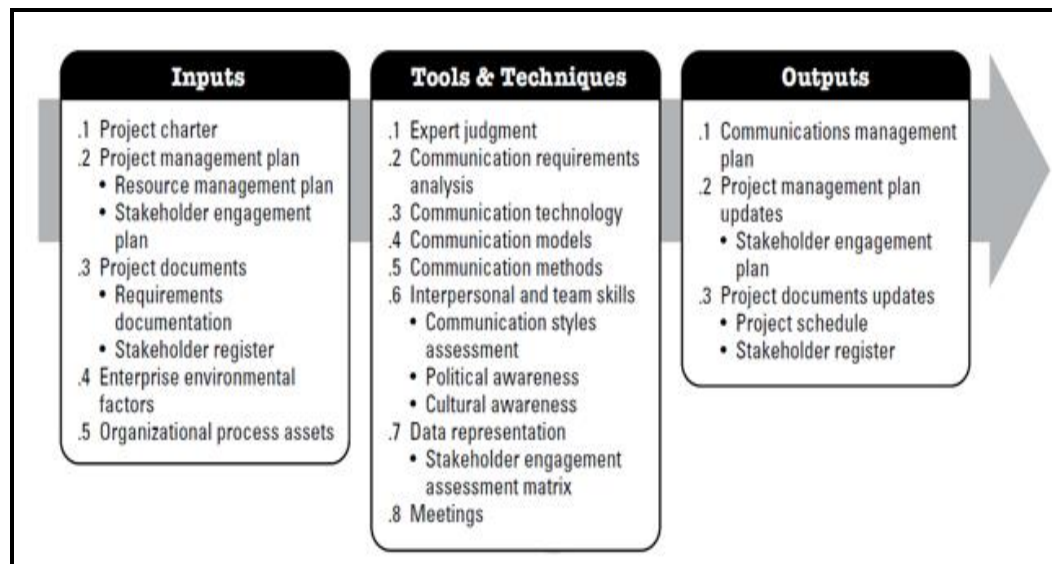
This knowledge area involves developing and implementing of an effective communication strategy that meets the needs of the stakeholders and project. Project communication is a vital activity since it communicates project scope, milestones, and progress. PMI (2017, p. 259) defines project communication processes as:

- **Plan Communication Management** – is the process of developing an appropriate approach and plan for project communication activities based on the information needs of each stakeholder or group. Important to this

process is the identification of the stakeholder and determining their project influence. Shown in Figure 13 are the inputs, tools, techniques, and outputs required for this process.

Figure 13

Plan Communications Management: Input, Tools & Techniques and Outputs



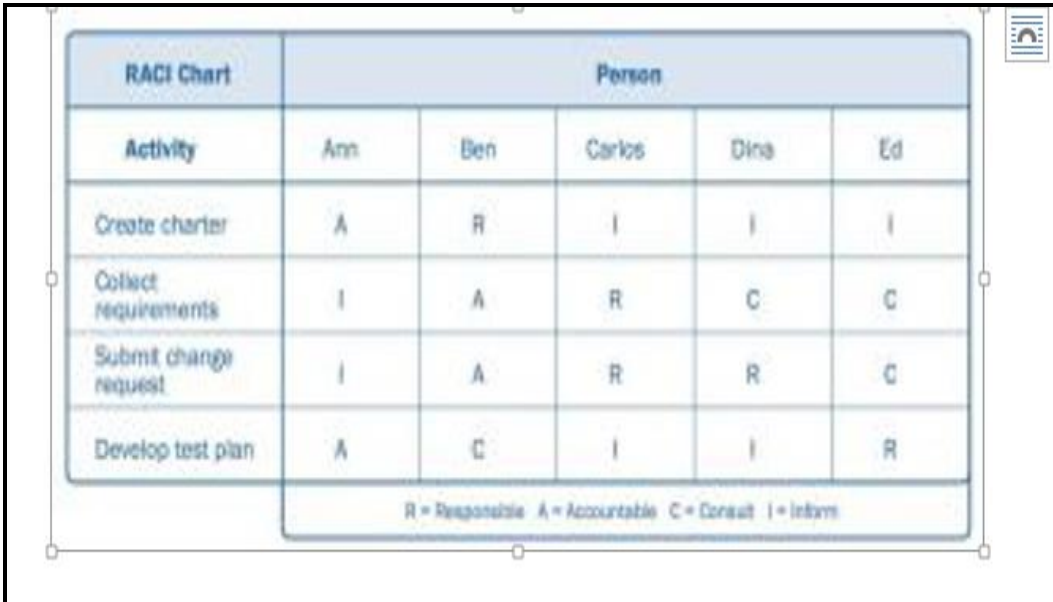
Source. Adopted from A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*), *Sixth Edition*, by the Project Management Institute. (2017, p.366).

- **Manage Communications** – the process of ensuring timely and appropriate collection, creation, distribution, storage, retrieval, management, and monitoring of project information.
- **Monitor Communications** – the process of ensuring the information needs of the project and stakeholders.

The representation of the data for this knowledge uses several tools and techniques through a hierarchical format such as a resource breakdown structure. Another approach is a responsibility assignment matrix (RAM), which according to PMI (2017, p. 317), “illustrates the connections between work packages, or activities, and project team members”. The RACI (responsible, accountable, consult and inform) chart is another method to assign roles and responsibilities. See Figure 14 of a sample RACI Chart.

Figure 14

Sample RACI Chart



RACI Chart	Person				
Activity	Ann	Ben	Carlos	Dina	Ed
Create charter	A	R	I	I	I
Collect requirements	I	A	R	C	C
Submit change request	I	A	R	R	C
Develop test plan	A	C	I	I	R

R = Responsible A = Accountable C = Consult I = Inform

Source. Adopted from A Guide to the Project Management Body of Knowledge, (PMBOK® Guide), Sixth Edition, by the Project Management Institute. (2017, p. 317).

The development of the FGP aid with the communication of the project process and uses appropriate communication tools to achieve the deliverables.

The FGP provides the ABNTA and ABICE with an adaptable and agile communication framework tailored to the organizational structure of both organizations. Further, it aids with their visibility during the implementation of the project and beyond the life of the project.

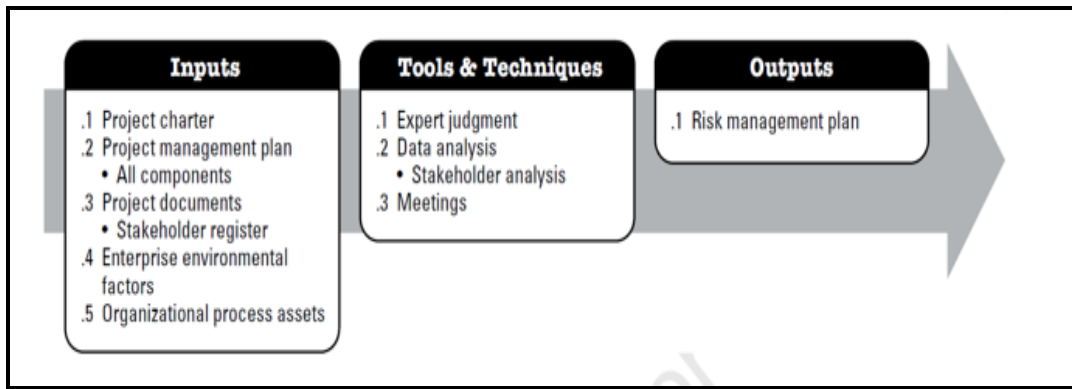
2.2.13 Project Risk Management

“Project Risk Management includes the processes of conducting risk management planning, identification, analysis, response planning, response implementation, and monitoring risk on the project” (PMI, 2017 P. 395). Thus, the Project Risk Management Processes occur within the planning, executing, monitoring, and controlling process groups. The Project Risk Management processes according to PMI (2017), includes the following:

Plan Risk Management – is a process of defining how to conduct risk management activities for a project. It involves identifying risks, their impact, and the probability of occurring. The development of the process follows the below standard established by PMI (2017) as shown in Figure 15.

Figure 15

Plan Risk Management: Inputs, Tools & Techniques, and Outputs



Source. Adopted from A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*), *Sixth Edition*, by the Project Management Institute. (2017, p. 401).

- **Identify Risks** – the process of identifying individual project risks, sources of overall project risk and documenting their characteristics.
- **Perform Qualitative Risk Analysis** – the process of prioritizing individual project risks for further analysis or action by assessing their probability of occurrence and impact.
- **Perform Quantitative Risk Analysis** – the process of numerically analyzing the combined effect of identified individual project risks and other sources of uncertainty on overall project objectives.

A suitable methodology to identify and measure the impact of the specified project risk is a probability matrix. The use of this tool prioritizes and evaluates the probability of the risk occurring. The results and analysis from the matrix build a framework to develop the appropriate risk response and tracking measures. Figure 16 establishes a sample framework for the measurement and assessment of project risks.

Figure 16

Example Probability and Impact Matrix with Scoring

		Threats					Opportunities						
Probability	Very High 0.90	0.05	0.09	0.18	0.36	0.72	0.72	0.36	0.18	0.09	0.05	Very High 0.90	
	High 0.70	0.04	0.07	0.14	0.28	0.56	0.56	0.28	0.14	0.07	0.04	High 0.70	
	Medium 0.50	0.03	0.05	0.10	0.20	0.40	0.40	0.20	0.10	0.05	0.03	Medium 0.50	
	Low 0.30	0.02	0.03	0.06	0.12	0.24	0.24	0.12	0.06	0.03	0.02	Low 0.30	
	Very Low 0.10	0.01	0.01	0.02	0.04	0.08	0.08	0.04	0.02	0.01	0.01	Very Low 0.10	
		Very Low 0.05	Low 0.10	Moderate 0.20	High 0.40	Very High 0.80	Very High 0.80	High 0.40	Moderate 0.20	Low 0.10	Very Low 0.05		
		Negative Impact					Positive Impact						

Source. Adopted from A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*), *Sixth Edition*, by the Project Management Institute. (2017, p. 408).

- **Plan Risk Responses** – the process of developing options, selecting strategies, and agreeing on actions to address overall project risk exposure, and treat.
- **Implement Risk Responses** – the process of implementing agreed-upon risk response plans.
- **Monitor Risks** – this is a process of monitoring the implementation of agreed risk response plans, tracking identified risks, identifying and analyzing new risks, and evaluating risk response effectiveness throughout the project.

The importance of this knowledge area to the FGP is the development of procedures and data analysis tools that evaluate all project risks to determine the probability and reduce the likelihood of negative risks. It will also add a new body of knowledge to the organizational structure of the ABNTA and ABICE, which presently does not formally exist.

2.2.14 Project Procurement Management

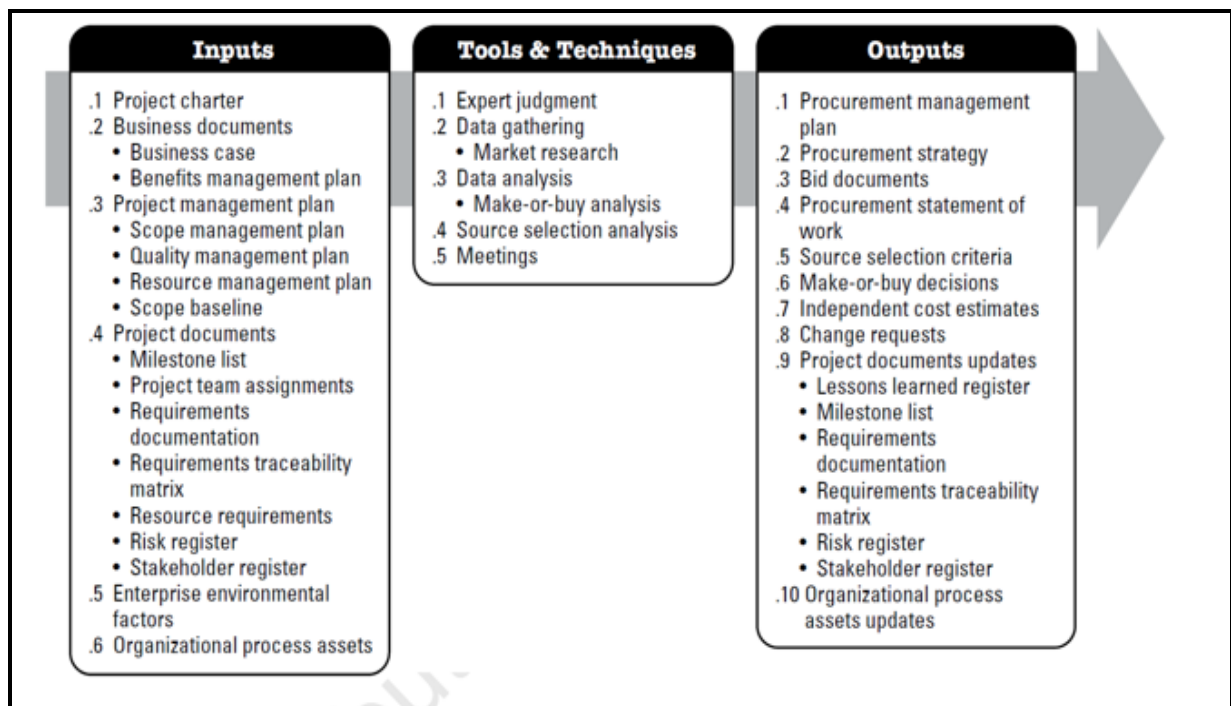
According to PMI (2017, p. 459) the procurement management process “is a process of purchasing or acquiring products, services, or results from outside the project team”. This project knowledge area keeps track of all the project

procurement contracts and associated deliverables. The processes related to this knowledge area based on PMI (2017, p.459):

- **Plan Procurement Management** – the process of documenting project procurement decisions, specifying the approach, and identifying potential sellers. Shown in Figure 17 are the inputs, tools, techniques, and outputs that relate to this process.

Figure 17

Plan Procurement Management: Inputs, Tools & Techniques, and Outputs



Source. Adopted from A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*), *Sixth Edition*, by the Project Management Institute. (2017, p. 466).

- **Conduct Procurements** – the process of obtaining seller responses, selecting a seller, and awarding a contract.
- **Control Procurements** – the process of managing procurement relationships, monitoring contract performance, making changes and corrections as appropriate, and closing contracts.

The tools and techniques for this knowledge area will assist in determining the appropriate contract types for the project. The technical requirements, quality, standards, schedule, and cost are key determinants for this knowledge area, which spans the planning, executing, monitoring, and controlling process groups.

Therefore, the development of the FGP outlines a procurement process, policies, procedures, and guidelines. It also identifies and accounts for the cost, schedule, and risks of the overall project. Additionally, data analysis requirements for the monitoring and controlling procurement relative to the project deliverables are important elements of the FGP.

2.2.15 Project Stakeholder Management

Stakeholders play an essential role in determining the success and failure of a project. Identifying and involving stakeholders in the project from its inception is crucial to meet their requirements. Accordingly, this knowledge area, based on PMI (2017, p. 503), “includes the process required to identify the people, groups, or

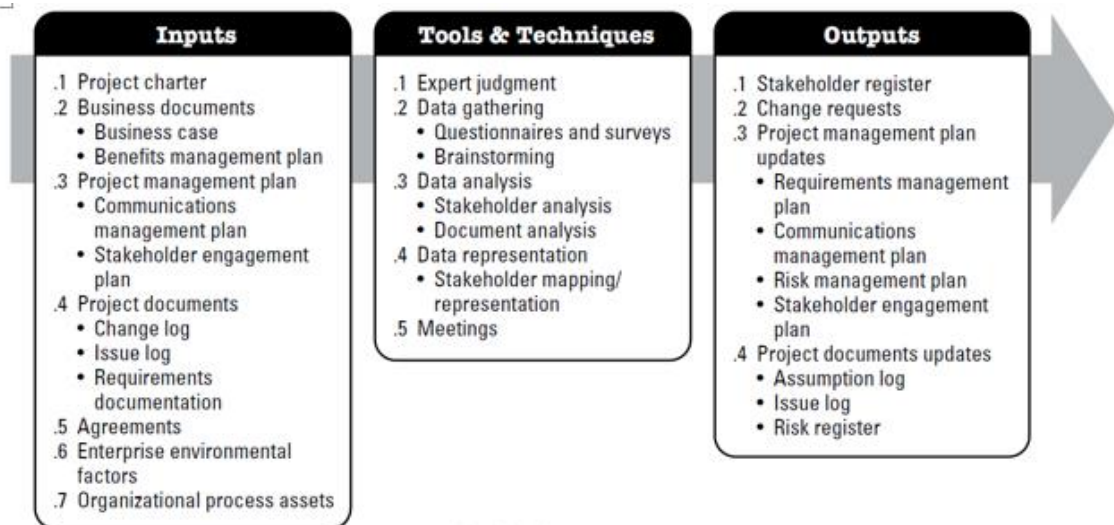
organizations that could impact or be impacted by the project. The four processes involved in Project Stakeholder Management occur throughout the five project process groups. PMI (2017) defines the processes as:

- **Identifying Stakeholders** – the stakeholders regularly, analyzing and documenting relevant information regarding their interests, involvement, interdependencies, influence, and potential impact on project success.

Figure 18 illustrates the inputs, tools, techniques, and outputs related to this process.

Figure 18

Identify Stakeholders: Inputs, Tools & Techniques, and outputs



Source. Adopted from A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*), *Sixth Edition*, by the Project Management Institute. (2017, p.507).

- **Plan Stakeholder Engagement** –the process of developing approaches to involve project stakeholders based on their needs and expectation, interests, and potential impact on the project.
- **Manage Stakeholder Engagement** – the process of communicating and working with stakeholders to meet their needs expectations, address issues, and foster appropriate stakeholder engagement involvement.
- **Monitor Stakeholder Engagement** – the process of monitoring project stakeholder relationships and tailoring strategies for engaging stakeholders through the modification of engagement strategies and pan.

Therefore, the development of the FGP along with the appropriate tools and techniques will assist the ABNTA and ABICE to identify stakeholders, develop appropriate mechanisms to analyze expectations, and develop fit-for-purpose management strategies to engage with stakeholders. Additionally, the FGP will also assist the ABNTA and ABICE to create a new body of knowledge, process, and procedure to manage stakeholder engagements.

2.3 Other applicable theories/concepts related to the project topic and context

2.3.1 Transformative Learning

Transformative learning according to Mezirow (2015) the development of quality educational programmes that goes beyond teaching functional literacy skills. As a learning theory transformative, learning focuses on adult education and young adult learning. Developed by Jack Mezirow, transformation learning focuses on the idea that learners can adjust their thinking based on new information. This theory of learning applies to TVET in that it analyses the way people learn in a formal and non-formal setting.

2.3.2 Regenerative Development

Regenerative development is a holistic approach that “regenerates” the ecosystem and makes them productive. Defined by Gabel (2015, p.1), “regenerative development is the use of resources to improve society’s wellbeing in a way that builds the capacity of support systems needed for future growth”. Therefore, the regenerative model, “reinforces the need for a holistic approach, integrating six processes of the human ecosystem i.e. environmental, social, economic, political, cultural, and spiritual” (Muller n.d., p. 13).

The application of the regenerative ‘whole system’ approach goes beyond sustainability and resilience methods. It focuses on the efficient use of inputs and

outputs. It incorporates the use of resources and technology that addresses the root cause of the problem. Therefore, the regenerative model uses a holistic management framework that seeks to revitalize and restore the full function of the ecosystem. It purports a win-win model, which Muller (n.d.) argues is a 'bonded approach', which is evident in the construct of the project management process.

2.3.3 Caribbean Vocational Qualifications

The Caribbean Vocational Qualification (CVQ) is an award that represents the achievement of competencies, which define core work practices of an occupational area, consistent with the levels articulated within the regional qualifications framework.

2.3.3.1 National Vocational Qualifications

The National Vocational Qualifications (NVQ) is the qualifications that assess someone's competence in a work situation, based on the national occupational standards (levels). It recognizes the skills and knowledge a person needs to do a job. The candidate needs to demonstrate and prove their competency in their chosen role or career path.

2.3.4 Assessment Levels

Level 1 (Foundation) indicates an initial stage below the usual standard for work.

Level 2 (Intermediate) people who work under supervision.

Level 3 (Advanced) people at level three (3) are employees who do not have the responsibility of managers but do not work under supervision.

Level 4 (Management) is for people who are responsible for organizing people and production.

2.3.5 Internal Verifier

An Internal Verifier is a person with direct responsibility for the quality assurance of the assessment process in an approved center and in any satellite sites, which assesses candidates.

2.3.6 External Verifier

An External Verifier is a person contracted or employed by the Awarding Body to carry out a quality assurance audit of the CVQ provision in an approved center. The External Verifier will audit the assessment system, including arrangements for the selection, recruitment, and training of assessors.

2.3.7 Assessor

A trained professional chosen by an organization to assess the performance of candidates against an approved occupational standard.

2.3.8 Competency-Based Education and Training

UNESCO defines CBET as an approach to vocational education and training in which skills, knowledge, and attitudes are specified to define, steer, and help to achieve competence standards, mostly within a national qualifications framework.

2.3.8.1 Occupational Standards

These are the written descriptions of the industry-agreed standards for competent performance in occupational roles. The standards, which include knowledge, skills, and understanding of each role, are presented as several units containing elements, three (3) parts –criteria, range, and explanations.

3. METHODOLOGICAL FRAMEWORK

According to McEwan (2017), placed into three broad categories information sources include primary, secondary, and tertiary sources. The use of various sources of information allows the researcher to set a methodological framework for the project. It also allows the researcher to validate and test the reliability of the information sources used in the FGP.

This section provides an overview of the information sources and methods used in the FGP, by defining the category of the information sources relevant to the FGP.

3.1 Information sources

3.1.1 Primary sources

According to McEwan (2017), primary sources of information are firsthand accounts or records of activity as they happened. Primary sources include statistical data, legislation, regulations, diaries, surveys, interviews, observations, eyewitness accounts, speeches, and historical documents.

3.1.2 Secondary sources

According to McEwan (2017), secondary sources of information provide interpretation, commentary, or analysis of other sources. Secondary information sources are written after an event, activity, or opinion of the author. Examples of secondary sources include textbooks, journals, dissertations, newspaper articles (opinion/reviews or analysis), and biographies.

Chart 2*Information sources*

Objectives	Information sources	
	Primary	Secondary
1. To create a Scope Management Plan to ensure the inclusion of all work necessary for the completion of the project	Interview, Survey (questionnaire), Statistical data, legislation	PMBOK Guide, Antigua and Barbuda National TVET Policy, Report on TVET Standards, NVQ & CVQ Industry Requirements, Newspaper Articles on TVET, UNDP Reports on Education, UNESCO Reports on TVET
2. To create a Schedule Management Plan for the on-time execution of the project within the established timeframe.	Interview, Survey (questionnaire), Statistical data, legislation	PMBOK Guide, Antigua and Barbuda National TVET Policy, Report on TVET Standards, NVQ & CVQ Industry Requirements, PMI Project Standard for Scheduling
3. To create a Cost Management Plan to define the process for the development and approval of the budget.	Interview, Survey (questionnaire), Statistical data, legislation	PMBOK Guide, Antigua and Barbuda National TVET Policy, Report on TVET Standards, NVQ & CVQ Industry Requirements, PMI Project Standard for Estimating
4. To create a Quality Management Plan to identify and include the quality requirements to meet stakeholders' expectations.	Interview, Survey (questionnaire), Statistical data, legislation	PMBOK Guide, Antigua and Barbuda National TVET Policy, Report on TVET Standards, NVQ & CVQ Industry Requirements, Reports and Requirements framework for TVET
5. To create a Resource Management Plan to identify, acquire, and manage all resources needed for the completion of the project.	Interview, Survey (questionnaire), Statistical data, legislation	PMBOK Guide, Antigua and Barbuda National TVET Policy, Report on TVET Standards, NVQ & CVQ Industry Requirements, Newspaper Articles on TVET

Chart 2 <i>Information sources (continues)</i>		
6. To create a Communication Management Plan for the effective communication of the project status to sponsor and stakeholders.	Interview, Survey (questionnaire), Statistical data, legislation	PMBOK Guide, Antigua and Barbuda National TVET Policy, Report on TVET Standards, NVQ & CVQ Industry Requirements
7. To create a Risk Management Plan to identify, and evaluate project risks, and to develop risk response and mitigating measures.	Interview, Survey (questionnaire), Statistical data, legislation	PMBOK Guide, Antigua and Barbuda National TVET Policy, Report on TVET Standards, NVQ & CVQ Industry Requirements, Newspaper Articles on TVET
8. To create a Stakeholder Management Plan to identify key project stakeholders and engagement mechanisms.	Focus Group Interview, Survey (questionnaire), Statistical data, legislation	PMBOK Guide, Antigua and Barbuda National TVET Policy, Report on TVET Standards, NVQ & CVQ Industry Requirements
9. To create a Procurement Management Plan to obtain the products, and services necessary for the execution of the project.	Interview, Survey (questionnaire), Statistical data, legislation,	PMBOK Guide, Antigua and Barbuda National TVET Policy, Report on TVET Standards, NVQ & CVQ Industry Requirements, , Procurement Guidelines for the NTA and ABICE

Source. Authors own elaboration (2021)

3.2. Research methods

The University of Newcastle Library (2020), defines research methods as strategies, processes, or techniques utilized in collecting data or evidence for

analysis to uncover new information or create a better understanding of the topic. However, there are different types of research methods, which researchers use. A qualitative research method is a descriptive method that obtains data based on opinions. This type of method engages in thematic analysis or interpretive patterns to interpret data. On the other hand, quantitative research methods utilize information from numerical data sources.

In this regard, the conduct of this FGP follows the applied research methods. According to Surbhi (2018), applied research is designed to solve a specific problem or answer certain questions. Thus, in the process of conducting the research associated with this FGP, using this approach would allow for the application of the PMI standard practice guidelines for project management to the design, and execution of this project.

However, selecting the appropriate research method for collecting, and analysing data depends on the scope and context of the research. Thus, the design and selection of the most effective research method seek to engender a robust methodological framework of reliability and validity for the content of the research for this FGP. In this regard, the following techniques methods would be utilized to conduct of the research.

3.1.3 Content Analysis – Neuman (2014) describes content analysis as research that examines patterns of symbolic meaning within written text, audio, visual, or other communication differences. In addition, this type of research

method is typically done as desk research. Within the context of this study, analyzing published research on topics and thematic areas related to education and TVET would allow for the coding of information relevant to the development of the PMPlan.

3.1.4 Interview

According to the University of Newcastle Library (2020), an interview is conducted either through a focus group (a group of persons related to the project) or one-on-one. The information obtained from the interview would aid in receiving new and validating pre-identified thematic areas relevant to the topic. The purpose of conducting interviews as part of the methods of this research would allow for the coding and classification of data using a structured and semi-structured in-depth interview session.

3.1.5 Survey (Questionnaire)

Neuman (2014), describes a questionnaire as a written document in survey research that has a set of questions given to respondents or used by an interviewer to ask questions and record answers. Questionnaires allow the researcher to investigate several topics and survey multiple key persons associated with the project. It is a reliable method of data collection, which generates both qualitative and quantitative information.

Chart 3.*Research Methods*

Objectives	Research methods		
	Content Analysis	Interview	Survey
1. To create a Scope Management Plan to ensure the inclusion of all work necessary for the completion of the project.	To obtain information that will inform the development, and understanding of the scope of the project.	To obtain information that will inform the development, and understanding of the scope of the project.	To obtain information that will inform the development, and understanding of the scope of the project.
2. To create a Schedule Management Plan for the on-time execution of the project within the established timeframe.	To utilize the data and information obtained to develop a schedule for the implementation of the project.	To receive information on the expectation and value of each project deliverable, which would input into the development of the project schedule.	
3. To create a Cost Management Plan to define the process for the development and approval of the budget.	The information obtained from this method would aid in the design of the budget requirements related to the project.	The information obtained would aid in the development of the budget. This would include the interview of experts and key stakeholders.	

Chart 3.

Research methods (continues)

Objectives	Research methods		
	Content Analysis	Interview	Survey
4. To create a Quality Management Plan to identify and include the quality requirements to meet stakeholders' expectations.	The information obtained from this method would aid in understanding and identifying the quality, technical and standards requirements for the project.	The interview with key stakeholders, users, and experts would assist with the identification of the quality requirements for the project.	The conduct of surveys among key stakeholders, educators, and industry experts would provide information and data on the quality and technical requirements for the project.
5. To create a Resource Management Plan to identify, acquire, and manage all resources needed for the completion of the project.	The information obtained from this method would utilize the standard management practice to develop the Resource Management Plan.	The information obtained from this method aids to estimate, acquire, develop, manage, and control resources related to the project. In addition, interviews with key experts, stakeholders, and the data used to support the Resource Management Plan.	The information obtained from this method aids with the process of developing and managing teams related to the execution of the project. This method provides data on expectations, competencies, and preferences in resolving issues, etc.

Chart 3.

Research methods (continues)

Objectives	Research methods		
	Content Analysis	Interview	Survey
6. To create a Communication Management Plan for the effective communication of the project status to sponsor and stakeholders.	The information obtained from this method provides input into the standard practice on the plan, manage, and monitor communications.	The information obtained from this method provides input into the type, frequency of the communication methods that supports the execution of the project.	The information obtained from this method provides input into the type, frequency of the communication methods that supports the execution of the project.
7. To create a Risk Management Plan to identify, and evaluate project risks, and to develop risk response and mitigating measures.	The information obtained from this method provides into the standard practice on the identification, analysis, and response measure for each risk associated with the project.	The information obtained from this method aids with the analysis of risks and the development of the appropriate risk response measure.	The information obtained from this method aids with the analysis of risks and the development of the appropriate risk response measure.
8. To create a Stakeholder Management Plan to identify key project stakeholders and engagement mechanisms.	The information obtained from this method aids with understanding stakeholder needs and expectations.	The information obtained from this method would aid in the identification of stakeholders, expectations, needs, identify, plan, manage and monitor stakeholder engagements.	The information obtained from this method aids with the management and monitoring of stakeholders.

Chart 3. (continued)

Objectives	Research methods		
	Content Analysis	Interview	Survey
9. To create a Procurement Management Plan to obtain the products, and services necessary for the execution of the project.	The Procurement Management Plan was developed from the information obtained during desk research/content analysis to develop an appropriate framework to plan, conduct, and control procurements related to the project.	The information and data obtained from this process through the interview of technical experts aid in the process to plan, conduct, and control procurements related to the project.	The information and data obtained from this method would aid in the process of plan, conduct, and control procurements.

Source: Author's own elaboration (2021)

3.2 Tools

In the project, management standard practice guides published by PMI, several tools are available to perform an activity to produce a result. Therefore, a tool is a tangible instrument or method used to accomplish a task or execute project responsibilities (PMI, 2017). Consequently, a template or software is essential to the project management tool used for planning, monitoring, or analyzing a project. Chart 4 details the required tools for the FGP.

Definition of Tools

- i. **Expert Judgement** – judgment provided based upon expertise in an application area, knowledge area, discipline, industry, etc., as appropriate for the activity being performed (PMI, 2017, p.79).
- ii. **Meetings** – conducted within the structured way among the project team or project stakeholders to either obtain or share information.
- iii. **Focus Group Interview** – stakeholders, brought together based on a specific subject to obtain specific project information.
- iv. **Brainstorming** – is a technique used to identify a list of ideas in a short period, conducted in a group setting (PMI, 2017, p.80).
- v. **Interview** –to obtain information from key stakeholders by asking a series of questions.
- vi. **Project life cycle** – A series of phases that a project passes through from its start to its completion (PMI 2017, p.716)
- vii. **Project proposal** – the process of developing an overview of a project.
- viii. **Data analysis** – techniques used to assess data and information.
- ix. **Questionnaire** – written sets of questions designed to quickly accumulate information from a large number of respondents (PMI 2017, p.718)
- x. **Document analysis** – the technique used to assess and evaluate project documents.
- xi. **Benchmarking** – the comparison of actual or planned products, processes, and practices to those of comparable organizations to identify best

practices, generate ideas for improvement, and provide a basis for measuring performance (PMI, 2017, p 699)

- xii. **Prototypes** – A method of obtaining early feedback on requirements by providing a working model of the expected product before actually building or doing it (PMI 2017, p.717)
- xiii. **Team skills** – the collective knowledge and experience of the project team.
- xiv. **Variance analysis** – a technique for determining the cause and degree of difference between the baseline and actual performance (PMI 2017, p. 725)
- xv. **Trend analysis** – an analytical technique that uses mathematical models to forecast future outcomes based on historical results (PMI 2017, p725)
- xvi. **Alternative analysis** – a technique used to evaluate identified options to select the options or approaches to use to execute and perform the work of the project (PMI 2017, p 699)
- xvii. **Multi-criteria analysis** – the technique utilizes a decision matrix to provide a systematic analytical approach for establishing criteria, such as risk levels, uncertainty, and valuation, to evaluate and rank many ideas (PMI 2017, p. 711).
- xviii. **Decomposition** – a technique used for dividing and subdividing the project scope and project deliverables into smaller more manageable parts (PMI 2017 p. 704).
- xix. **Rolling wave planning** – an iterative planning technique in which the work to be accomplished in the near term is planned in detail (PMI 2017, P721)

- xx. **Precedence diagramming** – a technique used for constructing a schedule model in which activities are represented graphically, and to show the sequence in which that activities are to be performed (PMI 2017, p. 714).
- xxi. **Dependency determination and integration** - a technique used to identify the appropriate type of dependency used to create the relationship between two activities.
- xxii. **Critical path method** – the sequence of activities that represents the longest path through a project, which determines the shortest possible duration (PMI 2017, p 704)
- xxiii. **Schedule network analysis** – a technique to identify early and late start dates, as well as early and late finish dates, for uncompleted portions of project activities (PMI 2017, p. 722)
- xxiv. **Analogues estimating** – a technique for estimating the duration or cost of an activity or a project using historical data from a similar activity or project (PMI 2017 p.699).
- xxv. **Parametric estimating** – an estimating technique in which an algorithm calculates cost or duration based on historical data and project parameters (PMI 2017 p. 712).
- xxvi. **Project management information system** – an information system consisting of tools and techniques used to gather, integrate, and disseminate the outputs of the project management process (PMI 2017, p. 716).
- xxvii. **Simulations** – is the initiation of actual activity.

- xxviii. **Performance reviews** – a technique that measures, compares, and analyzes actual performance of work in progress on the project against the baselines (PMI 2017, p. 712).
- xxix. **Root-cause analysis** – an analytical technique used to determine the basic underlying reason that causes a variance, defect, or risk (PMI 2017. p. 721).
- xxx. **Audits** – an objective evaluation of a project.
- xxxi. **Quality improvement methods** -
- xxxii. **Process analysis** – an analytical technique to evaluate a series of project processes.
- xxxiii. **Logical data model** – a database that describes the information or data to be collected.
- xxxiv. **Flowcharts** – the depiction in a diagram format of the inputs, process actions, and outputs of one or more processes (PMI 2017, p. 707).
- xxxv. **Cost of quality** – all cost incurred over the life of the product by investment in preventing nonconformance to requirements (PMI 2017, p.703)
- xxxvi. **Cost-benefit analysis** – a financial analysis tool used to determine the benefits provided by a project against its cost (PMI 2017, p. 703).
- xxxvii. **Cost aggregation** – summing the lower-level cost estimates associated with the various work packages for a given level within the project’s WBS (PMI 2017, p. 703).
- xxxviii. **Historical information reviews** - the review of data on previous projects.
- xxxix. **Reserve analysis** – an analytical technique to determine the essential features and relationships of components project management plan to

establish a reserve for the schedule duration, budget, and estimated cost of funds for a project (PMI 2017, p. 719).

- xi. What-if scenario analysis** – the process of evaluating scenarios to predict their effect on project objectives (PMI 2017, p. 728).
- xli. Responsibility assignment matrix** – a grid that shows the project resources assigned to each work package (PMI 2017, p. 720).
- xlii. Resource breakdown structure** – a hierarchical representation of resources by category and type (PMI 2017, p. 719)
- xliii. Interpersonal skills** - Interpersonal skills are the behaviors and tactics a person uses to interact with others effectively. Interpersonal skills range from communication and listening to attitude and deportment.
- xliv. Training** – Teaching a person a particular skill.
- xliv. Team assignments** – provides information on the overall project team assignments, roles, and responsibilities.
- xlvi. Stakeholder engagement matrix** – is a matrix that identifies project stakeholders there power and interest or power and influence.
- xlvii. Communication requirements analysis** – an analytical technique to determine the information needs of the project stakeholders through interviews, workshops, and the study of lessons learned from previous projects (PMI 2017, p. 701).
- xlviii. Stakeholder analysis** – is a technique of systematically gathering and analyzing quantitative and qualitative information to determine how to account for the stakeholder interest throughout the project (PMI 2017, 723).
- xlix. Checklist** – is a list of completed project activities or actions.

- I. **SWOT Analysis** – analysis of strengths, weaknesses, opportunities, and threats of an organization (PMI 2017, p. 724).
- li. **Risk categorization** – a group of potential causes of risks (PMI 2017, p. 720)
- lii. **Probability and impact assessment** - an analysis of the probability of occurrence as it relates to project risks.
- liii. **Decision tree analysis** – a diagramming and calculation technique for evaluating the implications of a chain of multiple options in the presence of uncertainty (PMI 2017, p. 704).
- liv. **Influence diagrams** – a graphical representation of situations showing causal influences, time, ordering of events, and other relationships among variables and outcomes (PMI 2017, p, 708)
- lv. **Stakeholder mapping** – the process of outlining all stakeholders in a project on a map.
- lvi. **Market research** – the process of determining the viability of a product, service, or project.
- lvii. **Make-or-buy analysis** – the process of gathering and organizing data about product requirements and analyzing them against available alternatives, including the purchase or internal manufacture of the product (PMI 2017 p. 710)
- lviii. **Source selection analysis** – an analysis of the attributes which a seller is required to meet (PMI 2017, p. 723)
- lix. **Proposal evaluation** – this is an evaluation that measures changes or progress.

- ix. Advertising** – producing advertisements for products and services.
- ixi. Earned value analysis** – an analysis of data related to scope, schedule, and resources.

Chart 4:

Tools

Objectives	Tools
1. To create a Scope Management Plan to ensure the inclusion of all work necessary for the completion of the project.	Expert judgment, data analysis, questionnaires, focus group interviews, meetings, document analysis, benchmarking, prototypes, variance analysis, trend analysis, alternative analysis, multi-criteria analysis.
2. To create a Schedule Management Plan for the on-time execution of the project within the established timeframe.	Expert judgment, decomposition, rolling wave planning, precedence diagramming, dependency determination and integration, critical path method, schedule network analysis, analogous estimating, parametric estimating, three-point estimating, bottom-up estimating, project management information systems, simulations, performance reviews, trend analysis, variance analysis, what-if scenario analysis.
3. To create a Cost Management Plan to define the processes for the development and approval of the budget.	Expert judgment, alternative analysis, reserve analysis, cost of quality, analogous estimating, parametric estimating, three-point estimating, bottom-up estimating, project management information systems, historical information review, cost aggregation, decision-making technique, earned value analysis, trend analysis.

Chart 4.*Tools (continues)*

<p>4. To create a Quality Management Plan to identify and include the quality requirements to meet stakeholders' expectations.</p>	<p>Expert judgment, benchmarking, brainstorming, interviews, cost-benefit analysis, cost of quality, flowcharts, logical data model, alternative analysis, document analysis, process analysis, root cause analysis, cause and effect diagrams, audits, quality improvement methods, questionnaires, performance reviews</p>
<p>5. To create a Resource Management Plan to identify, acquire, and manage all resources needed for the completion of the project.</p>	<p>Expert judgment, responsibility assignment matrix, resource breakdown structure, alternative analysis, bottom-up estimating, analogous estimating, parametric analysis, interpersonal team skills. Communication technology, training, team assignments, trend analysis, performance reviews, cost-benefit analysis.</p>
<p>6. To create a Communication Management Plan for the effective communication of the project status to sponsor and stakeholders.</p>	<p>Expert judgment, stakeholder engagement matrix, communication requirements analysis, communication methods and modes, project management information systems.</p>
<p>7. To create a Risk Management Plan to identify, and evaluate project risks, and to develop risk response and mitigating measures.</p>	<p>Expert judgment, stakeholder analysis. Interviews, checklist, brainstorming, root cause analysis, SWOT analysis, document analysis, risk categorization, probability and impact matrix, risk probability and impact assessment, assessment of other risks, decision tree analysis, influence diagrams, cost-benefit analysis, alternative analysis, strategies for overall project risks, audits, performance analysis.</p>

Chart 4. <i>Tools (continues)</i>	
8. To create a Stakeholder Management Plan to identify key project stakeholders and engagement mechanisms.	Expert judgment, questionnaires, brainstorming, stakeholder analysis, stakeholder mapping, stakeholder engagement matrix, root cause analysis, benchmarking, stakeholder analysis, power and interest matrix, power and influence matrix.
9. To create a Procurement Management Plan to obtain the products, and services necessary for the execution of the project.	Expert judgment, market research, make-or-buy analysis, source selection analysis, proposal evaluation, advertising, performance reviews, earned value analysis, trend analysis.

Source. Compiled from Project Management Institute. (2017). *A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) - Sixth Edition*, Project Management Institute, Inc., Pennsylvania.

3.3 Assumptions and constraints

According to Tarhanis (2018), assumptions are what are true as it relates to knowledge, experience, and information relevant to a project. Assumptions are events that are likely to occur during the project life cycle.

On the other hand, constraints are anything that restricts project activities or the implementation process. Based on the PMI (2017) guide, there are six (6) project constraints, i.e. scope, quality, schedule, cost, risk, and resources.

Assumptions for the Final Graduation Project

- There are dedicated resources to conduct the project.
- Stakeholders will participate in the project.
- The project will solve the intended problem.
- No change to the Project scope.
- The project will receive the support needed for its implementation.

Constraints for the Final Graduation Project

- **Scope** – change in the scope of the project based on the availability of information.
- **Cost** – potential increase in cost based on changes to scope and market price increases.
- **Schedule** – alternations in project schedule due to changes in scope.
- **Resources** – adequate resources not available to complete project deliverables.
- **Quality** – quality requirements not achieved due to changes in scope and cost.

Chart 5.*Assumptions and Constraints*

Objectives	Assumptions	Constraints
1. To create a Scope Management Plan to ensure the inclusion of all work necessary for the completion of the project.	Well-defined project scope including all requirements.	Changes in project scope as project progress.
2. To create a Schedule Management Plan for the on-time execution of the project within the established timeframe.	An achievable Project Schedule Plan is developed.	The project not completed in the stipulated timeframe.
3. To create a Cost Management Plan to define the processes for the development and approval of the budget.	A detailed project budget is developed.	Not enough financial resources are available to complete the project.
4. To create a Quality Management Plan to identify and include the quality requirements to meet stakeholders' expectations.	The project quality requirements not met, including the stakeholder requirements.	Quality requirements may change based on alternations with the project scope and cost.
5. To create a Resource Management Plan to identify, acquire, and manage all resources needed for the completion of the project.	All resources are available for the implementation of the project.	Resources may not be available for the execution of the project.
6. To create a Communication Management Plan for the effective communication of the project status to sponsor and stakeholders.	All elements of the project sufficiently communicated to all project stakeholders.	Deliverables and milestones not adequately communicated to stakeholders.

Source. Author's own elaboration (2021)

Chart 5.

Assumptions and Constraints (continues)

Objectives	Assumptions	Constraints
7. To create a Risk Management Plan to identify, and evaluate project risk response and mitigating measures.	All risks appropriately identified, cost and risk response measures implemented.	Unidentified risk changes the schedule and cost of the project.
8. To create a Stakeholder Management Plan to identify key project stakeholders and engagement mechanisms.	All Stakeholder requirements identified including their level of interest, influence, and power.	Stakeholder requirements level of interest, influence, and power change during the project.
9. To create a Procurement Management Plan to obtain the products, and services necessary for the execution of the project.	An approved procurement plan is developed.	Goods and services are not available based on the quality requirements, cost, and timeframe needed for the project.

Source. Author's own elaboration (2021)

3.4 Deliverables

According to Simmons (2020), project deliverables are the results of a project or the processes in the project. A deliverable based on Simmons discourse is what stakeholders expect after the completion of the project. Therefore, project deliverables include plans, reports, signed contracts, and assessment results.

The below table provides a summary of the deliverables related to the FGP, based on the identified specific objectives.

Chart 6.*Deliverables*

Objectives	Deliverables
1. To create a Scope Management Plan to ensure the inclusion of all work necessary for the completion of the project.	Project Scope Management Plan, which identifies all requirements to complete the project.
2. To create a Schedule Management Plan for the on-time execution of the project within the established timeframe.	Schedule Management Plan, including the performance requirements, management, and control mechanisms for the project.
3. To create a Cost Management Plan to define the processes for the development and approval of the budget.	Cost Management Plan, which details the cost requirements of the project including the performance requirements.
4. To create a Quality Management Plan to identify and include the quality requirements to meet stakeholders' expectations.	Quality Management Plan, which details the quality requirements to achieve project expectations and deliverables.
5. To create a Resource Management Plan to identify, acquire, and manage all resources needed for the completion of the project.	Resource Management Plan, which details all of the requirements for the project implementation.
6. To create a Communication Management Plan for the effective communication of the project status to sponsor and stakeholders.	Communication Management Plan, which outlines the mechanisms and methods of communication with all project stakeholders.
7. To create a Risk Management Plan to identify, and evaluate project risks, and to develop risk response and mitigating measures.	Risk Management Plan, which includes the identification, analysis, response mechanisms for the project risks.

Chart 6.

Deliverables (continues)

Objectives	Deliverables
8. To create a Stakeholder Management Plan to identify key project stakeholders and engagement mechanisms.	Stakeholder Management Plan that identifies stakeholders, and includes engagement, risk, and power and influence mechanisms for the project.
9. To create a Procurement Management Plan to obtain the products, and services necessary for the execution of the project.	Procurement Management Plan that established the procurement framework for the project, including the process of managing and controlling procurements.

Source. Author's own elaboration (2021)

4. RESULTS

The content of this chapter will describe the activities, processes, and actions to fulfill the project's objectives along each project knowledge area. The chapter will highlight with graphs, charts, and diagrams the fulfillment of results associated with the previously stated objectives.

4.1 Project Charter

Developed by the project team, the Project Charter approved by the sponsor provides other important information for the development of the project.

The elements of the Project Charter follow a template taken from <https://www.projectmanagementworld.com/2021/08/project-charter-template-ppt-download/>. The project manager expanded the template to include other important information that was necessary for the approval of the Project Charter by the sponsor and the beneficiary.

PROJECT CHARTER

1. General Project Information		Project Identification Number: GTA/AB/345/21-22
Project Name	Improve the Capacity of the National Training Agency (NTA) and the Antigua and Barbuda Institute of Continuing Education (ABICE) to Issue National and Caribbean Vocational Qualifications	
Project Sponsor	European Union	
Project Start Date	May 10 th , 2021	
Project End Date	September 10 th , 2022 (16 months)	

2. Project Team				
	Name	Area of Responsibility	Telephone	Email
Project Manager	Barbara Williams	Project Management	1-268-464-5897	barbarawilliamsn@gmail.com
Team Members				
	James Mason	Financial Manager	1-268-562-7852	Jmason@gmail.com
	Fay Cabral	TVET Training Expert	1-268-752-6654	CabrailFT@gmail.com
	Albert Browne	Education Specialist & Quality Assurance	1-268-463-2110	AlbertBrowne@yahoo.com
	Amy Bailey	Procurement Specialist	1-268-562-1745	BaileyAmy2@gmail.com
	Diggs Parker	Communication Specialist	1-268-775-2547	Diggscommunications@gmail.com
	Adam Giles	EU Representative	1-246-456-2516	Agiles@eu.europa.com
	Clare	TVET Curriculum	1-268-464-	educationtec@gmail.co

	Francis	Developer	8898	m
	Latoya Peters	Project Secretary	1-268-464-5212	PetersLatoya@ab.gov.a g

3. Project Impact:

The project will streamline, and establish an operational framework whereby the ABNTA and ABICE can work together to promote, coordinate and manage the national technical vocational training system. Which will create a “world-class workforce”.

Business Case:

The advancement in technology and the modernization of the workplace due mainly to increase global competition has created a demand for a skilled and adaptable workforce. To this end, the Government of Antigua and Barbuda has recognized the need to enhance the human resources capacity of the country by improving the quality of skilled labour. It has been widely recognized that there is a shortage of skills in key areas of the economy, which have affected its economic development, and ability to respond to the labour market demands at various levels of society. The labour market gaps are a result of not having a well-resourced training system that can adequately respond to demands at the secondary, tertiary, and vocational levels. Thus, the results of the project will ensure an adequate supply of trained employees for national development in areas relating to the national training needs, and other regional commitments through the implementation of the CSME.

4. Project Scope Statement:

To close the existing development gaps that have constrained the labour force, and hindered the mobility of workers to capitalize on employment opportunities at the national and regional levels. Therefore, the project will develop a national TVET programme, structure, strategy, and training to promote economic development, expand the labour market, and improve the quality of employment.

5. Objectives:

- To enable the ABNTA and ABICE to improve their capacity to issue

National and Caribbean Vocational Qualifications.

- To modernize the national TVET teaching and training infrastructure.
- To increase the mobility of the labour force at the national and regional levels.
- To develop a competitive workforce.
- To develop a national TVET strategy.

6. Deliverables:

The following deliverables will apply to the project.

Strategic Development

- TVET Policy and Strategy
- New legislative enactments for TVET

Training/ workshop sessions:

- CBET Methodology Workshop
- Assessor Training Workshop
- Internal Verifier Training Workshop
- External Verifier Training Workshop
- Facilities Audit Training Workshop
- Workplace Mentorship/ Skills Development Sessions
- Financial Administration in Institutions/ Training Centers Workshop Sessions
- Records Management in Institutions/ Training Centers Workshop Sessions.

Practicum/ certification exercises:

- Assessor Certification Exercises
- Internal Verifier Certification Exercises
- External Verifier Certification Exercises
- Training & Development Certification Exercises
- Training & Assessment Certification Exercises.
- Site visit evaluations/ facilities audit exercises for twelve (12) programmes.
- CVQ certificates for successful candidates.

7. Project Milestones

Milestones	Target Completion Date
TVET Policy and Strategy Developed and approved	August 18 th , 2021
Enactment of amendments to existing TVET legislation	December 15 th , 2021
Procurement of training computers	September 10 th , 2021
Training Workshop Sessions	December 9 th , 2021
Practicum Certification Exercises	May 31 st , 2022

Site visit evaluations/facilities audit for 12 programmes	July 23 rd , 2022
Award of certification	August 8 th , 2022
Project closure	September 2 nd , 2022
8. Project Stakeholders <ul style="list-style-type: none"> • ABNTA • ABICE • Minister of Education • Ministry of Finance • Secondary school students • Tertiary level students • European Union 	
9. Resource Requirements: <ul style="list-style-type: none"> • Computer and training materials • Training Site • TVET Training Expert • Legal Drafter • Education Policy Specialist • Advertisements • Printed certificates 	
10.Risks:	
Risks	Risks Ratings (H,M,L)
• Sponsor withdraws funding due to implementation delays	High
• Insufficient budget allocation	High
• Lack of interest in the training programme	High
• Inexperienced project team	High
• Lack of experience by training consultant	High
11.Assumptions: <ul style="list-style-type: none"> • Stakeholders are available to participate in the project. • The project achieves its objectives. • Qualified consultants are available to be engaged in the project. • The sponsor promptly provides the financial resources for the project. • ABICE and ABNTA fully support the implementation of the project. • Government provides the required support in a timely basis. • The project is completed within the stated timeline 	
12.Constraints: <ul style="list-style-type: none"> • The project experienced delays due to untimely disbursements by the sponsor. • Stakeholders are not available to participate in the project. • Training site and equipment not available at the time needed, resulting in implementation delays. • Counterpart support not provided by the Government. 	

<p>13. Financials: The budget to complete the project is XCD \$1,540,000 million</p>		
<p>14. Approval/Project Steering Committee</p> <p>Clare Browne – Director of Education, Ministry of Education William Harris – Financial Secretary, Ministry of Finance Alisa Weste – Executive Director, ABICE Dane Willette – Chief Legal Drafter, Ministry of Legal Affairs Ramesh Hayden – ABICE Board Chair</p>		
<p>15. Summary of Changes:</p>		
Revision	Date approved	Description of changes
<p>16. Approval Signatures:</p> <p>Sponsor: Date:</p> <p>Minister of Education: Date:</p>		

4.2.2. Scope Management Plan

Improve the Capacity of the National training Agency (NTA) and the Antigua and Barbuda Institute of Continuing Education (ABICE) to issue National and Caribbean Vocational Qualifications

Project Identification Number: GTA/AB/345/21-22
Prepared By: Barbara Williams, Project Manager
Document Version:

Approved by Project Sponsor: _____
Approved by Beneficiary: _____
Approved by PSC Chair: _____
Date: _____

Abstract: According to Brown (2021), the Scope Management Plan is a management tool to effectively handle and adjust a project's baseline to ensure that it aligns with the project objectives. In this respect, the project Scope Management Plan follows the principles outlined by the PMI. Therefore, the development of the Scope Management Plan includes the project scope statement, the WBS, the scope baseline and the project deliverables.

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The purpose of the Scope Management Plan is to ensure the successful completion of all the work required to fulfill the project deliverables. Additionally, the Scope Management Plan sets out the procedures and plans required to develop, define, monitor, verify, control, and implement project changes. The execution of the project is the responsibility of the project manager with assigned areas to the project team.

Therefore, the process used to develop to scope plan included the Collect Requirements, Define Scope, Create WBS, Verify Scope, and Control Scope. Additionally, a Requirements Management Plan forms part of the scope as a means of managing change.

4.2.1 Scope Management Approach

The project manager is responsible for the execution of the Scope Management Plan. The Scope Statement, Work Breakdown Structure, and WBS Dictionary define the scope of this project. The Project Manager, Sponsor, and the Project Steering Committee are responsible for establishing and approving the documentation for measuring the project scope. They are also responsible for initiating changes to the project scope. The project manager is required to review and evaluate all scope changes initiated by the project team. Once the scope change is accepted, the project manager will submit the change request to the Project Steering Committee for approval. Following its approval, the Chair of the

Project Steering Committee will submit the scope change request with its written justification to the sponsor for approval.

On the other hand, the Project Manager and Project Steering Committee are responsible for approving operational and technical scope changes. The Project Steering Committee and the sponsor are responsible for approving scope changes that affect the schedule and cost. Following the project manager's approval of all scope changes, the Project Steering Committee, and the sponsor, the project team will update all project documents, and communicate the scope changes to all stakeholders.

Within the project scope of this project the Ministry of Education, the project sponsor, and the Project Steering Committee are responsible for the approval of the completed project deliverables.

4.2.2 Roles and Responsibilities

The project sponsor, Project Steering Committee, project manager, and team are responsible for specific aspects of the project scope. Outlined in Chart 7 are the roles and responsibilities for the Scope Management Plan.

Chart 7*Scope Roles and Responsibilities*

Scope Roles and Responsibilities Matrix		
Name	Role	Responsibility
European Union	Sponsor	<p>Provide project finances.</p> <p>Provide policy direction throughout the execution of the project.</p> <p>Final approval of project deliverables.</p> <p>Approve or deny scope change requests.</p> <p>Review and evaluate scope change requests.</p> <p>Approve and provide additional project funds based on changes to scope and cost.</p>
PSC	Oversight committee	<p>Communicate directly with the sponsor.</p> <p>Provide overall guidance on the monitoring of the project.</p> <p>Review, evaluate, and make recommendations on projects scope baseline.</p> <p>Review, evaluate, and recommend scope changes to the sponsor for approval.</p> <p>Resolve project implementation issues escalated by the project manager.</p> <p>Provide technical and functional direction to the project manager and team.</p> <p>Review and approve scope changes.</p>

Chart 7: <i>Roles and Responsibilities (continues)</i>		
Project Manager	Overall project management	<p>Measure and verify project scope.</p> <p>Assess scope change requests.</p> <p>Make recommendations for scope change requests to the Project Steering Committee.</p> <p>Organize and convene change control meetings.</p> <p>Communicate outcomes of scope change requests.</p> <p>Update project documents upon approval of all scope changes.</p> <p>Monitor project performance.</p> <p>Monitor project risk and implement risk responses measures.</p> <p>Receives information from and report to the Project Steering Committee.</p>
Project Team	Project members	<p>Provide technical guidance to the project manager.</p> <p>Recommend scope changes to the project manager.</p> <p>Escalate technical and functional issues to the project manager.</p> <p>Participate in scope changes meeting.</p> <p>Participate in meetings with the project manager on issues relating to the project scope.</p> <p>Communicate scope changes to stakeholders.</p> <p>Receive feedback from stakeholders.</p>
Stakeholders	Beneficiary	<p>Participate in meetings to define project requirements.</p> <p>Recommend project changes to the project manager and team.</p> <p>Escalate as appropriate project implementation challenges to the project manager and team.</p>

Chart 7. <i>Roles and Responsibilities (continues)</i>		
Ministry of Education	Beneficiary	Provide project implementation guidance and support. Participate in meetings of the Project Steering Committee. Receive and approve reports on project implementation. Communicate with project manager on project implementation.

Source. Author's own elaboration (2021)

4.2.3 Scope Definition

An analysis of existing documents, including a desk review of technical studies on TVET, market research, education data, and interviews with key stakeholders, provided critical information for this process. The results aided with the definition of the project scope. Additionally, the Project Charter and the initially approved project concept determine the scope definition.

4.2.4 Project Scope Statement

To close the existing development gaps that have constrained the labour force and hindered the mobility of workers from capitalizing on employment opportunities at the national and regional levels. Accordingly, the project will develop a national TVET programme, structure, strategy, and train key stakeholders. The project

deliverables will promote economic development, expand the labour market, and improve the quality of employment.

4.2.4.1 Project Scope Description

The project will achieve the following deliverables:

Strategic Development

- Develop a TVET Policy and Strategy
- Enact new legislative amendments for TVET

Training/ workshop sessions:

- Conduct four (4) CBET Methodology workshops and train twenty-five (25) persons in CBET Methodology
- Conduct four (4) Assessor training workshops and train twenty-five (25) persons
- Conduct four (4) Internal Verifier training Workshops and train twenty-five (25) persons
- Conduct four (4) External Verifier training Workshops and train twenty-five (25) persons
- Conduct one (1) Facilities Audit Training Workshops and train five (5) persons
- Conduct Workplace Mentorship/ Skills Development Sessions and train 20 persons

- Conduct one (1) Financial Administration in Institutions/ Training Centers Workshop Sessions and train five (5) persons
- Conduct one (1) Records Management in Institutions/ Training Centers Workshop Sessions and train 5 persons.

Practicum/ certification exercises:

- Conduct Assessor Certification Exercises
- Conduct Internal Verifier Certification Exercises
- Conduct External Verifier Certification Exercises
- Conduct Training & Development Certification Exercises
- Conduct Training & Assessment Certification Exercises.
- Conduct site visit evaluations/ facilities audit exercises for twelve (12) programmes.
- Award CVQ certificates for successful candidates

4.2.5 Project Benefits

- Improved and upgraded education and training facilities;
- Deliver quality education and training;
- Improve the awareness of TVET among the national population;
- Issue NVQs and CVQs in targeted areas;
- Improve the governance structures of the ABNTA and ABICE; and
- Create an environment of long-life learning.

4.2.6 Project Acceptance Criteria

The project includes the training and certification of key professionals within the national TVET infrastructure. It also includes components for developing the national TVET policy, strategy, and the enactment of amendments to existing legislation to strengthen the national TVET framework. For the project to be successful, it must be completed on schedule, i.e. within sixteen (16) months and budget XCD \$1,540,000. It should also achieve the established performance criteria and requirements traceability matrix.

4.2.7 Project Deliverables

The project will achieve the following deliverables:

- Completion of an approved TVET Policy and Strategy
- Enactment of amendments to TVET related legislation
- Twenty-five (25) persons trained in CBET methodology
- Twenty-five (25) persons trained and certified as assessors
- Twenty-five (25) persons trained and certified as internal verifiers
- Twenty-five (25) persons trained and certified as external verifiers
- One (1) Facilities Audit Training completed and five (5) persons trained
- One (1) Financial Admissions and Institutions Training completed and five (5) persons trained

- One (1) Records Management in Institutions training completed and five (5) persons trained
- One (1) Mentorship/ Skills Development workshop completed and train twenty (20) persons
- Site visit and audit of twelve (12) programmes
- Award of CVQ certificates
- hardware and software procured

4.2.8 Project Exclusions

The project does not include the following:

- Payment for the use of training facility
- Implementation of approved TVET Policy and Strategy
- The transportation of trainees to training sites

4.2.9 Key Performance Indicators

According to Wootton (2020), Key Performance Indicators (KPIs) are quantifiable measures that the project team will use to measure the project performance. The KPIs will aid the project manager and team to evaluate and determine the project's critical success factors while identifying how to measure each KPI. The SMART (Specific, Measurable, Achievable, Results-Oriented, and Time-bound) criteria would be used to measure the project's KPIs. The project

manager will evaluate changes to the KPIs, approved by the Project Steering Committee and sponsor.

Chart 8.

Key Performance Indicators

Key Performance Areas	Success Criteria	KPI	Timeline	How is it going to be measured	How often to measure
Trained Professionals	Greater employment mobility achieved and a decrease in the national employment gap	100% of project participants that complete the training programme in CBET, assessors, internal verifiers, external verifiers, financial administration , records management, facilities audit	6 months	Workshop evaluation and labour force surveys	Monthly
CVQ Certified Professionals	Awarded new employment at the national and regional level	100% of participants receive CVQ certification in CBET, assessors, internal verifiers, external verifiers, financial administration , records management, facilities audit	6 months	Workshop evaluation	Monthly

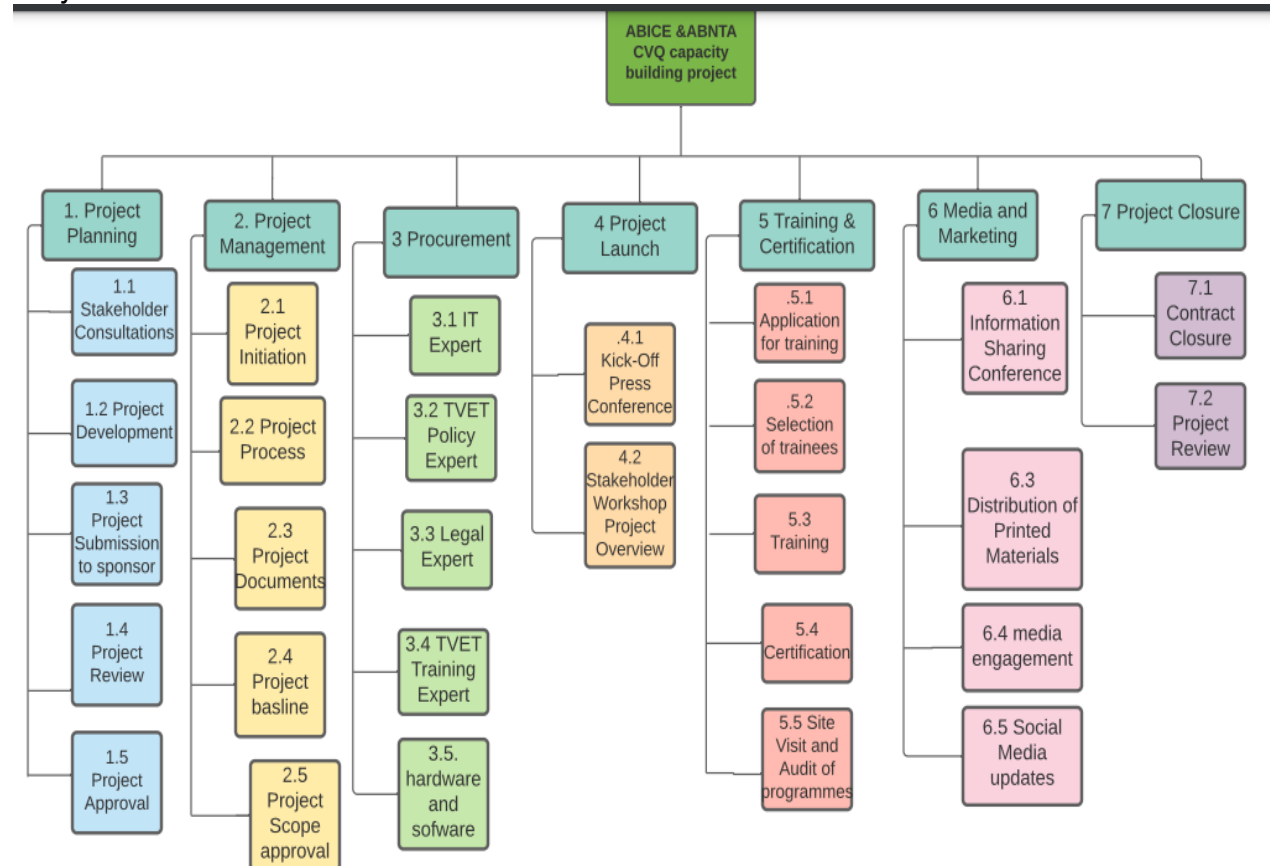
Chart 8.					
<i>Key Performance Indicators</i>					
Policy and Strategy	Policy and strategy approved by the beneficiary	# of public and private sector institutions that incorporate the policy into their education structure and work programme	1 year	National Education Report and data	Quarterly
Legislative Amendments	Legislative amendments approved by the beneficiary	Enactment of legislation by the parliament and its enforcement	1 year	Gazette of legislation	Quarterly
Research and Innovation in TVET	Results of research used to develop new TVET training areas	# of new TVET training areas developed and implemented	2 years	Results of survey	Yearly
Upgrade of 12 audited programmes	Recommendations from audit report implemented	100% of TVET programmes audited	1 year	Reports of Audit	Quarterly
Employment creation	National and regional employment opportunities awarded to certified nationals	Generate 100 or more national jobs	12 months after project completion	Company Research	Yearly (after project completion)

Source. Author's own elaboration (2021)

4.2.10 Work Breakdown Structure

Figure 19.

Project Work Breakdown Structure



Source. Author's own elaboration (202)

4.2.11 WBS Dictionary

Chart 9.

WBS Dictionary

WBS Dictionary				
Project Title: Improve the Capacity of the National Training Agency (NTA) and the Antigua and Barbuda Institute of Continuing Education (ABICE) to Issue National and Caribbean Vocational Qualifications				
Project Identification Number: GTA/AB/345/21-22				
WBS Code	Component Name	Description of Work	Deliverables	Resources
Project Planning				
1.1	Stakeholder consultations	Engagement with key project stakeholders to determine their expectations, needs, and requirements	Stakeholder power, influence matrix, and inputs into the Requirements Management Plan, and Communication Plan	Internet, video conference equipment
1.2	Project development	The project concept is reviewed and updated and all relevant documentation for the project approval based on the sponsor's requirements are developed	Project concept and approval documentation completed	Printer, computer, internet access
1.3	Project submission to sponsor	Review of all project documents by the project manager and PSC for submission to the sponsor	Draft project documents developed and approved by PSC	Printer, computer, internet access

Chart 9.				
<i>WBS Dictionary (continues)</i>				
1.4	Project review	Review of comments and feedback by sponsor on the project documents	Reviewed and updated project documents	Printer, computer, internet access
1.5	Project approved	Submission of updated project documents to sponsor	Approved project documents circulated to the project team	Printer, computer, internet access
2.1	Project initiation	Project Charter developed	Project Charter approved and circulated	
2.2	Project process	The processes involved in the implementation of the project are developed by the project manager and team through a series of data gathering and research methods	Project process approved by the PSC and sponsor	
2.3	Project documents	All relevant project documents for the execution and implementation of the project developed	Project Management Plan developed	

Chart 9.				
<i>WBS Dictionary (continues)</i>				
2.4	Project baseline	Project baselines are developed based on the Project Charter and Business Case	Approved project baselines	
2.5	Project scope approved	Project scope developed based on the Project Charter	Approved project scope	
Procurement				
3.1	IT Expert	Implement procurement strategy and process for the hiring of a consultant	Report procurement process and actions	IT Expert - Consultant
3.2	TVET Policy Expert	Implement procurement strategy and process for the hiring of a consultant	Report procurement process and actions	TVET Policy Expert – Consultant
3.3	Legal Expert	Implement procurement strategy and process for the hiring of a consultant	Report procurement process and actions	Legal Expert – Consultant
3.4	TVET Training Expert	Implement procurement strategy and process for the hiring of a consultant	Report procurement process and actions	TVET Training Expert – Consultant

Chart 9.				
<i>WBS Dictionary (continues)</i>				
Project Launch				
4.1	Kick-off press conference	Engage stakeholders on the kick-off activity for the project, invite stakeholders to launch, organize media and other information materials for the launch	Completed launch and press conference	Media, The venue, printed project overview
4.2	Stakeholder workshop project overview	Organize and invite stakeholders to project overview workshop	Workshop completed and project objectives communicated to stakeholders	Media, venue, printed materials, Computer and conference
Training and Certification				
5.1	Application	Application for training developed and distributed via various media	Application for training approved	Communication specialist, printer, computer, social media tools
5.2	Selection of trainees	Conducting of interviews for the selection of trainees and notification of awardees	Trainees selected	Interview venue

Chart 9:				
<i>WBS Dictionary (continues)</i>				
5.3	Training	Practical training and workshop conducted for CBET methodology, assessors, internal verifiers, external verifiers, facilities audit training, financial administration records management	Professional development training completed Report of training Evaluation of training survey completed	TVET training consultant, training materials, training center, Training hardware and software
5.4	Certification	Assessment of trainees for the awarding of CVQ	CVQ awarded to trainees that meet the qualifying criteria Assessment Report	TVET training consultant, printed certificates
5.5	Site visit audit of 12 programmes	Develop the methodology and process for the site visit and audit of 12 programmes	Assessment/audit Report	TVET training consultant
Media and marketing				
6.1	Information Sharing Conference	Organize and invite participants to the information-sharing conference on the status of the project and its performance	Report of conference	The conference venue, printed materials, computer,

Chart 9.				
<i>WBS Dictionary (continues)</i>				
6.2	Print Materials	Design and identify subject areas for printed information materials on the project	Distribution of printed information materials on TVET	Printer, computer
6.3	Distribution of printed materials	Develop distribution mechanism and method to distribute education institutions and pre-identified workplaces	Distribution plan Report of information impact, use, and distribution	Printer
6.4	Media engagement	Organize monthly media engagements to provide status updates on the project	Status update developed	
6.5	Social media updates	Design and implement a social media campaign on TVET policy strategy and legislation	Social media campaign implemented, uploaded, and information updated daily	Social media tools, information

Chart 9.				
<i>WBS Dictionary (continues)</i>				
Project Closure				
7.1	Contract closure	Handing over deliverables to the beneficiary, closing supplier contracts, releasing staff and equipment, and informing stakeholders of the closure of the project	Project Closure Report	
7.2	Project review	Review project impact and implementation	Project Implementation Report	

Source. Author's own elaboration (2021)

4.2.12 Scope Verification

This process includes the verification of project deliverables against the original scope as defined in the scope statement, WBS, WBS Dictionary, and the KPIs. The project manager will verify that the scope meets the established requirements, and will inform the PSC and the sponsor. The PSC and sponsor are responsible for the formal acceptance of the deliverable. The Requirements Traceability Matrix is the basis upon which to verify the scope. The project sponsor and PSC will accept the deliverable by signing a project deliverable acceptance document. Once signed off, the project manager will communicate the outcomes to the project team.

4.2.13 Scope Control

The project manager and the project team will collaborate to control the scope of the project. This process involves monitoring changes to the scope baselines established through the WBS, WBS Dictionary, and the project deliverables. The KPIs form part of the scope baseline to monitor the performance of the project deliverables.

Request for changes to the project scope follows a defined process. The sponsor, PSC, project manager, or team members can request changes to the project scope. Scope change requests must be reviewed and evaluated by the project manager, and submit feedback, supporting or rejecting the change to the scope. To further review and assess scope change requests a change control meeting including technical experts is a crucial aspect of this Plan. The PSC handles approval of any changes to the scope, including the sponsor. After approval of the change request, the project manager will record and accept the change and sign the change control document. The relevant project document will be updated by the project manager and stakeholders appropriately informed. The beneficiary can request scope changes and sign off/approve such changes.

Requirements Management Plan

Date:

Document Version:

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4.2.21 Requirements Traceability Matrix

4.2.22 Configuration/Change Management Plan

4.2.16 Document Control Information

Document Title:	Requirements Management Plan
Project Title:	Improve the Capacity of the National Training Agency (NTA) and the Antigua and Barbuda Institute of Continuing Education (ABICE) to Issue National and Caribbean Vocational Qualifications
Document Author:	Barbara Williams
Project Owner:	European Union
Project Manager:	Barbara Williams
Document Version:	Version 1
Date:	

Document Approver(s)

Name	Role	Action	Date
		(approve/review)	

4.2.14 Version Control

According to Harrin (2021), document version control is the process of tracking and managing different document versions to know the correct iteration of the file. Incorporating the below document version control ensures that every member of the project team is working from the same document. It prevents miscommunication among the project team on important project actions.

Chart 10.*Document Version Control*

Version	Date	Author	Rationale	Approval date and Signature

Source. Reproduced from <https://www.girlsguidetopm.com/how-to-do-document-version-control/> by Harrin (2021)

4.2.18 Requirements Management Process

Requirements Management is a process that occurs throughout the project's lifecycle and relates to other project management areas. Requirements Management is a defined process of identifying, documenting, and validating the requirements and outlining the implementation structure. Therefore, the purpose of the Requirements Management Plan is to capture, analyze and manage established project requirements are captured, analyzed, and managed (Stobirski, 2020). In this regard, this document will describe the requirements project process, define the roles and responsibilities related to the plan, identify and describe the tools, techniques, methodology, and templates. The primary input for developing the plan includes the project charter, stakeholder register, and the approved project concept note.

4.2.17 Requirements Tools and Techniques

To engage stakeholders a combination of methods including interviews, surveys, group building techniques, field research, desk and document research, workshops, and focus group consultations to ensure that the appropriate requirements are carefully captured. The requirements traceability matrix is the main technique used in this plan.

4.2.18 Requirements Management Process and Lifecycle

The methodology that will guide the development and implementation of the requirements management plan process includes activities that will collect, identify, define, evaluate, prioritize, approve, and trace the project requirements. Additionally, a Configuration Management process forms part of the Plan, which details the process of addressing changes. Therefore, the approach for requirements management follows the following steps:

Requirements Identification: The project requirements were obtained from project stakeholders using various data gathering tools, including interviews, focus groups, surveys, brainstorming, storyboard, and workshops.

Requirements Evaluation: The project team will assess and categorize each requirement to ensure consistency with the overall project objectives, including the implementation costs. Additionally, the project manager will verify that the requirements fall within the project scope as defined in the project charter. The out-of-scope requirements would be logged in the requirements documentation. A

requirements traceability matrix will identify the acceptance criteria to identify the achievement of the project requirements at an acceptable level.

Requirements Documentation: The identified requirements would be evaluated and, documented. The requirements will be added to the project plan and the project team will identify the appropriate methodology to monitor and report on each requirement. Therefore, Chart 11 shows the structure of the requirements documentation to be used for identifying, documenting, evaluating, prioritizing, approving, and validating requirements:

Chart 11.

Requirements Documentation Matrix

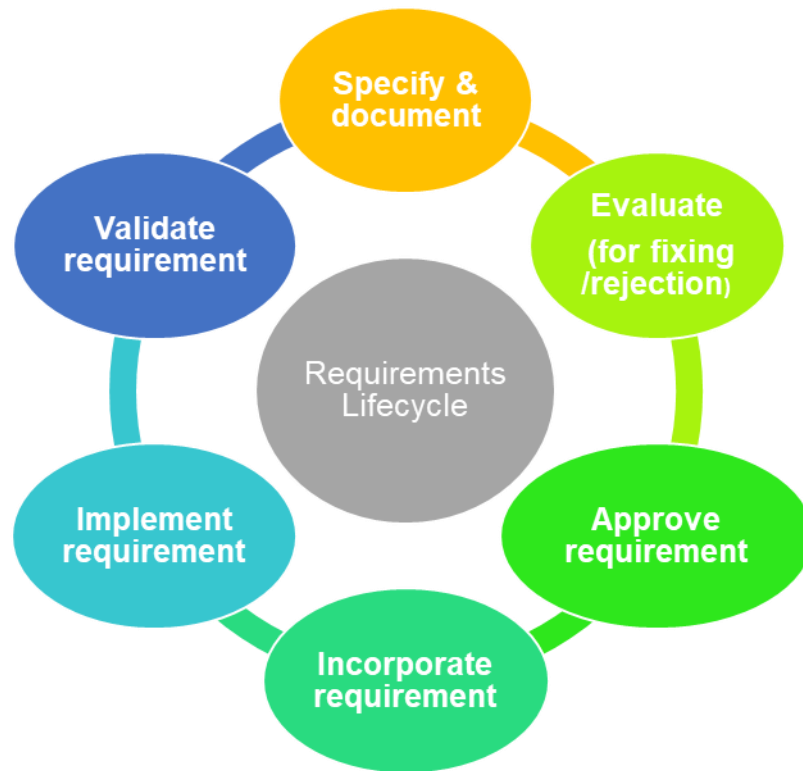
Requirements Documentation	
Date	The date when the requirement was discussed.
Identification	An identification number for the requirement.
Name of requirement	Short name or description of the requirement, including its importance and impact on cost, quality, and schedule.
Category	Indicate the category of the requirement e.g. technical, training, quality, performance requirement, etc.
Requirement description	State a description of the requirement.
Acceptance criteria	State the acceptance criteria that stakeholders will use to measure and validate the requirement.
Status	Indicate the status of the requirement (i.e. specified, evaluate (for fixing/rejection), approved, incorporate implement, validate).
Requested by	Indicate the name of the stakeholder that proposed the requirement.

Source. Author's own elaboration (2021)

Approve Requirements: The sponsor, PSC, and project manager will agree on the requirements for the project and their prioritization. The PSC will ensure that all the in-scope requirements can be achieved within the project cost and schedule. The formal approval of the requirements would be logged in the Decision Log and the minutes of the PSC will be recorded.

Monitor and Validate Requirements: The project manager will continuously monitor the implementation of each requirement. New requirements and changes will be addressed through the formal change control process. The formal acceptance of the requirements for the project must align with the deliverables and the established acceptance criteria.

The requirements lifecycle for this project follows the below process as shown in Figure 20.

Figure 20.*Project Requirements Lifecycle*

Source. Author's own elaboration (2021)

4.2.19 Requirements Roles and Responsibilities

The main roles and responsibilities for the requirements management process include:

Chart 12.

Requirements Roles and Responsibilities Matrix

Role	Responsibility
Project Sponsor	<ul style="list-style-type: none"> • Approving and rejecting requirements. • Approving the prioritization of requirements. • Accountable for all requirements. • Approving requirements acceptance criteria.
Project Steering Committee	<ul style="list-style-type: none"> • Reviewing and evaluating requirements. • Submitting requirements to the project sponsor for approval. • Monitor and validate approved requirements. • Recommend changes to the requirements acceptance criteria.
Project Manager	<ul style="list-style-type: none"> • Monitoring, controlling, and reporting the status requirements documentation and process. • Evaluating, prioritizing requirements. • Validating requirements. • Establishing the data gathering methods for the identification and documentation of requirements.
Project Team	<ul style="list-style-type: none"> • Review requirements documentation. • Recommend changes to project requirements and acceptance criteria. • Assist the project manager to monitor, control, and validate requirements.
Ministry of Education	<ul style="list-style-type: none"> • Review requirements documentation. • Recommend changes to project requirements and acceptance criteria.

Source. Author's own elaboration (2021)

4.2.20 Requirements Prioritization

Stated below is the prioritization categorization for the project plan.

However, in implementing the project the project team will continuously evaluate the plan to determine what requirements were achieved and which can be eliminated. To determine the level of priority, the project team will consider any changes or updates based on chart 13. Approved changes to the project's requirements would be updated in the Requirements Traceability Matrix and communicated to the project stakeholders.

Chart 13

Requirements Prioritization Matrix

Priority Level	Definition
High	The requirements are critical and required for the project's success, performance, and for the implementation to progress to the next level.
Medium	These requirements can be completed before the next project phase commences.
Low	These requirements are functional and are not critical to the success of the project.

Source. Author's own elaboration (2021)

4.2.21 Requirements Traceability Matrix

The above matrix allows the project team to manage changes and to track all requirements throughout the project life cycle. Therefore, the purpose of the matrix is to verify that all requirements are completed based on the project charter.

Chart 14.
Requirements Traceability Matrix

Project Title: Improve the Capacity of the National Training Agency (NTA) and the Antigua and Barbuda Institute of Continuing Education (ABICE) to Issue National and Caribbean Vocational Qualifications Project Identification Number: GTA/AB/345/21-22								
WB S ID.	Description	Requirement Description	Project objectives	Project deliverable	Product development requirements	Priority	Verification	Status
1.1	Stakeholder consultations	Engagement with key project stakeholders to determine their expectations , needs, and requirements	To identify stakeholder expectations, needs, and requirements	Development of the stakeholder's requirement register and power and influence matrix	Funds for the project team Requirements and stakeholder templates Inputs from data gathering methods among stakeholders Project team	High	Clearly defined stakeholder requirement	

Chart 14.
Requirements Traceability Matrix (continues)

1.2	Project development	The project concept is reviewed and updated and all relevant documentation for the project approval based on the sponsor's requirements are developed	To finalize the project concept and documentation required by the sponsor for approval	Approved Project Concept Note and Application Forms	<p>Funds for the project team</p> <p>Inputs from data gathering methods among stakeholder</p> <p>Official application forms required by the sponsor</p> <p>Project team</p>	High	Written approval from the PSC	
1.3	Project submission to sponsor	Review of all project documents by the project manager and PSC for submission to the sponsor	To receive project approval from the sponsor and PSC	Approved project documents	<p>Funds for the project team. Inputs from data gathering methods among stakeholder.</p> <p>Application forms required by the sponsor</p>	High	Written approval from the sponsor	

Chart 14.

Requirements Traceability Matrix (continues)

Chart 14. Requirements Traceability Matrix (continues)								
1.4	Project review	Review of comments and feedback by sponsor on the project documents	To receive project approval from the sponsor and PSC	Updated project documents	Funds for the project team Inputs from data gathering methods among stakeholder Official application forms required by the sponsor Project team	High	Approval of updated project documents	
1.5	Project approved	Submission of reviewed and updated project documents submitted to sponsor	To receive project approval from the sponsor and PSC	Updated project documents	Funds for the project team Inputs from data gathering methods among stakeholder Official application forms required by the sponsor	High	Written approval of the project documents by the sponsor	

Chart 14.

Requirements Traceability Matrix (continues)

2.1	Project initiation	Project Charter developed	The development and completion of the Project Charter	Updated and approved project charter	<p>Funds for the project team</p> <p>Inputs from data gathering methods among stakeholder</p> <p>Official application forms required by the sponsor</p> <p>Project team</p>	High	Approval of the project charter	
2.2	Project process	The processes involve the development of requirements for the project through a series of data gathering methods	The completion of the project documents from the data gathering and research methods.	Updated and approved project documents	<p>Funds for the project team</p> <p>Inputs from data gathering methods among stakeholder</p> <p>Official application forms required by the sponsor Project team</p>	High	Written approval of the project documents by the sponsor	

Chart 14.

Requirements Traceability Matrix (continues)

<p>Chart 14.</p> <p>Requirements Traceability Matrix (continues)</p>								
2.3	Project documents	All relevant project documents for the execution and implementation of the project developed	The review and finalization of the project documents.	Updated and approved project documents	Funds for the project team Inputs from data gathering methods among stakeholder Official application forms required by the sponsor Project team	High	Written approval of the project documents by the sponsor	
2.4	Project baseline	Project baselines are developed based on the Project Charter and Business Case	The completion of the project baselines including scope, schedule, cost, and quality	Completion and approval of the project baselines	Funds for the project team Inputs from data gathering methods among stakeholder Approved project charter Project team	High	Written approval of project baselines from PSC including PSC	

Chart 14.

Requirements Traceability Matrix (continues)

2.5	Project scope approved	Project scope developed based on the Project Charter	The development and completion of the project scope	Completion and approval of the project scope	<p>Funds for the project team</p> <p>Inputs from data gathering methods among stakeholder</p> <p>Official application forms required by the sponsor</p> <p>Approved project charter</p> <p>Project team</p>	High	Written approval of project scope by PSC including sponsor	
3.1	IT Expert	Implement procurement strategy and process for the hiring of a consultant	The development of the procurement strategy	Approved procurement strategy and plan	<p>Finances for the procurement of goods and services</p> <p>Approved procurement strategy and plan</p> <p>Procurement schedule</p>	High	Reports on the procurement process	

Chart 14. Requirements Traceability Matrix (continues)								
3.2	TVET Policy Expert	Implement procurement strategy and process for the hiring of a consultant	To secure the services of a qualified TVET Policy Expert	TVET Policy developed and approved	Finances for the procurement of TVET Policy expert Procurement plan and strategy Qualification requirements for expert Assign a project team member	High	Consultancy reports Acceptance of deliverables by the beneficiary	
3.3	Legal Expert	Implement procurement strategy and process for the hiring of a consultant	To secure the services of a qualified Legal expert	Amendments to legislation drafted, approved, and implemented	Finances for the procurement of Legal Expert Procurement plan and strategy Qualifications requirements for expert Assign project team IT Expert	High	Consultancy reports Acceptance of deliverables by the beneficiary	

Chart 14.

Requirements Traceability Matrix (continues)

3.4	TVET Training Expert	Implement procurement strategy and process for the hiring of a consultant	To secure the services of a qualified TVET Training expert	Trained and certified professionals to support the infrastructure development of the national TVET system	Finances for the procurement of TVET Policy expert Procurement plan and strategy Qualification requirements for expert Assign a project team member	High	Consultancy reports Acceptance of deliverables by the beneficiary Trained professionals as established by project baselines	
3.5	Hardware and software	Procurement of hardware and software	The procurement of hardware and software that meets training specifications	Hardware and software procured and implemented	Finances for the procurement of TVET Policy expert Procurement plan and strategy Hardware and software specifications	High	Procurement report Training reports	

Chart 14.

Requirements Traceability Matrix (continues)

4.1	Kick-off press conference	Engage stakeholders on the kick-off activity for the project, invite stakeholders to launch, organize media and other information materials for the launch	To build stakeholder awareness on the benefits of the project	Improved stakeholder awareness about the project	Assign a project team member Identify and invite stakeholders Invite media Print information materials and media kits Confirm conference space for the launch Project funds for the launch	High	Training evaluation report	
4.2	Stakeholder workshop project overview	Organize and invite stakeholders to project overview workshop	To build stakeholder awareness about the project	Improved awareness of TVET among stakeholders and national infrastructure	Confirm workshop venue Funds for workshop Printed workshop materials Technical experts	High	Training evaluation reports	

Chart 14.

Requirements Traceability Matrix (continues)

5.1	Application	Application for training developed and distributed via various media	To develop the application form for the training programme	Approval and distribution of application forms	<p>Approved application form</p> <p>Assign a project team member</p> <p>Distribution of application form to stakeholders</p> <p>Finances for the design and printing of the application forms</p>	High	Approved application Form	
5.2	Selection of trainees	Conducting of interviews for the selection of trainees and notification of awardees	To conduct the selection of the trainees for the training programme	Selection of the required number of trainees	<p>Selection of the interview date and time</p> <p>Establishment of the selection panel</p> <p>Criteria for the selection of trainees</p> <p>Assign project team members</p>	High	Report from the selection process	

Chart 14.

Requirements Traceability Matrix (continues)

5.3	Training	Practical training and workshop conducted for CBET methodology , assessors, internal verifiers, external verifiers, facilities audit training, financial administratio n records management	To conduct training and workshop in the identified TVET areas	To train professionals in the identified TVET area, based on project scope	Assign project team members Training room and equipment TVET training expert Finances to execute associated activities Training manuals and materials	High	Training report	
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Chart 14.

Requirements Traceability Matrix (continues)

5.4	Certification	Assessment of trainees for the awarding of CVQ	The certification of professionals in CVQ	To certify professionals in identified CVQ areas	Assign project team members Training room and equipment TVET training expert Finances to execute associated activities Training manuals and materials Testing materials	High	Training report Number of CVQ issued	
5.5	Site visit audit of 12 programmes	Develop the methodology and process for the site visit and audit of 12 programmes	To conduct the site visits and audits to identify gaps, and develop an action plan to address weaknesses	Completed audit and results reviewed and approved by the beneficiary	Technical expert The focal point of the beneficiary Access to site Project finances	High	Audit and Site Visit Reports	

Chart 14.

Requirements Traceability Matrix (continues)

6.1	Information Sharing Conference	Organize and invite participants to the information-sharing conference on the status of the project and its performance	To provide a project status update to stakeholders	Update stakeholders	Assign project members Technical experts Conference room Conference materials Media Project finances	High	Project progress and performance reports	
6.2	Print Materials	Design and identify subject areas for printed information materials on the project	To build stakeholder awareness about the project and framework for the development of the national TVET infrastructure	Update stakeholders To deliver factual information on the national TVET infrastructure To engage stakeholders	Media Technical expert Communication plan Assign a project team member Project finances	High	Report of communication initiatives Communication evaluation reports Results of communication surveys	

Chart 14.

Requirements Traceability Matrix (continues)

6.3	Distribution of printed materials	Develop distribution mechanism and method to distribute education institutions and pre-identified workplaces	To build stakeholder awareness about the project and framework for the development of the national TVET infrastructure	Update stakeholders To deliver factual information on the national TVET infrastructure To engage stakeholders	Media Technical expert Communication plan Assign a project team member Information distribution schedule Project finances	High	Report of communication initiatives Communication evaluation reports Results of communication surveys	
6.4	Media engagement	Organize monthly media engagements to provide status updates on the project	To build stakeholder awareness about the project and framework for the development of the national TVET infrastructure	Update stakeholders To deliver factual information on the national TVET infrastructure	Media Technical expert Communication plan Assign a project team member Project finances	High	Report of communication initiatives Communication evaluation reports	

Chart 14.

Requirements Traceability Matrix (continues)

6.5	Social media updates	Design and implement a social media campaign on TVET policy strategy and legislation	To build stakeholder awareness about the project and framework for the development of the national TVET infrastructure	Update stakeholders To deliver factual information on the national TVET infrastructure To engage stakeholders	Communication plan Assign a project team member	high	Report of communication initiatives Communication evaluation reports Results of communication surveys	
7.1	Contract closure	Handing over deliverables to the beneficiary, closing supplier contracts, releasing staff and equipment	To formally close the project	Project deliveries verified	Assign project team members	High	Project implementation and performance reports	

Chart 14.

Requirements Traceability Matrix (continues)

7.2	Project review	Review project impact	To identify the project impact on the national TVET system	Project outputs verified	Assign a project team member	High	Project Performance Report	
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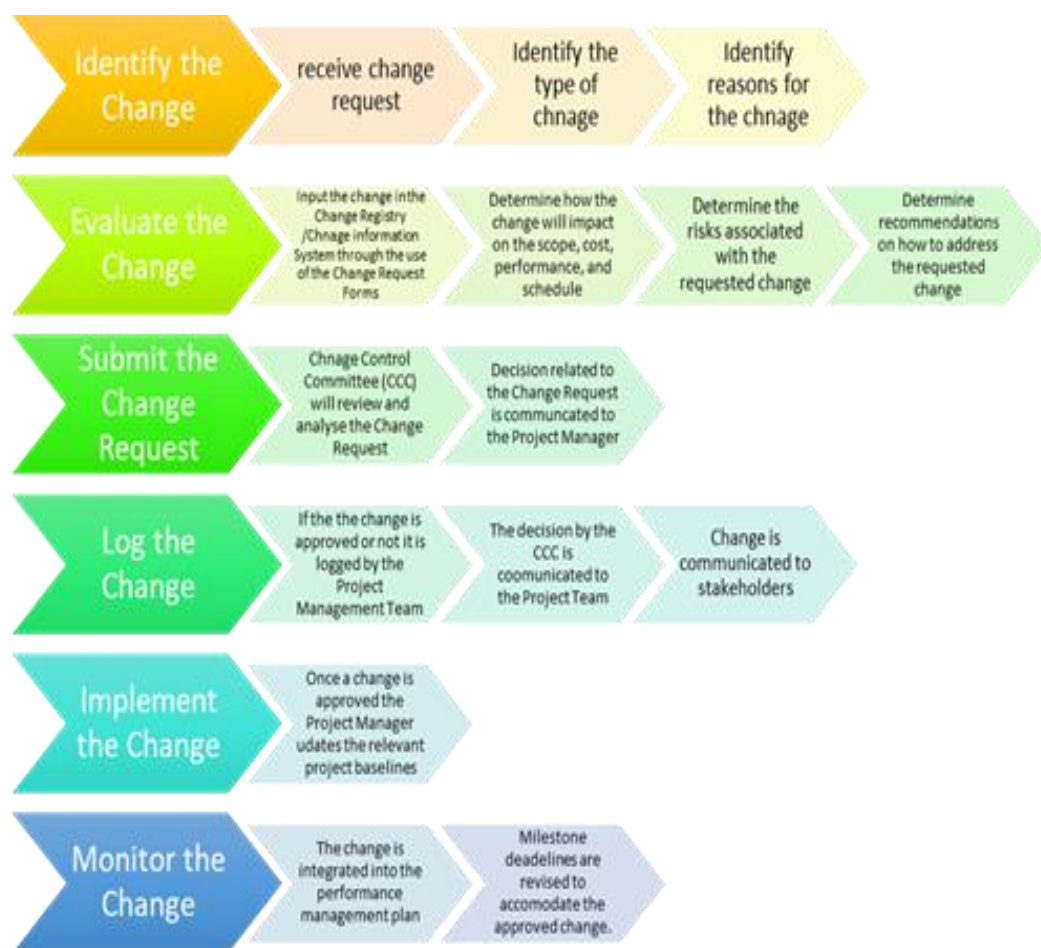
4.2.24 Configuration/Change Management Plan

The Change and Configuration Management Plan for the project defines the activities that will manage and control change during the execution and control stage of the project. Any change (including the addition of new features) related to the project must be measured against the established project baseline relating to the scope, budget, schedule, performance, and risks.

A Change Management Committee comprising the sponsor, PSC, project manager, and beneficiary is responsible for managing change requests. The project manager will receive all change requests and the project team is responsible for their evaluation. The project manager will log all change request in a Change Control Register, which forms part of the inputs for the closure phase of the project.

The below plan (Figure 21) details the steps for the change management process:

Figure 21.

Project Change Management Process

Source. Author's own elaboration (2021)

4.3. Schedule Management Plan

Improve the Capacity of the National Training Agency (NTA) and the Antigua and Barbuda Institute of Continuing Education (ABICE) to Issue National and Caribbean Vocational Qualifications Project

Identification Number: GTA/AB/345/21-22

Prepared By: Barbara Williams, Project Manager

Document Version:

Approved by Project Sponsor: _____

Approved by Beneficiary: _____

Approved by PSC Chair: _____

Date:

Abstract: The Project Schedule Management Plan identifies and establishes the criteria for developing, monitoring, and controlling the project schedule. The schedule includes a description of the high-level workflows and activities, roles and responsibilities, schedule management process, project schedule metrics, performance requirements, and the reporting format. A template obtained from <https://www.pm2alliance.eu/publication> aided with the development of this Plan.

Table of Content

- 4.3.1 Workflows and Activities
- 4.3.2 Roles and Responsibilities
- 4.3.3 Schedule Management Process
- 4.3.4 Schedule Development
- 4.3.5 Units of Measure and level of Accuracy
- 4.3.6 Estimate Activity Resources
- 4.3.7 Gantt Chart
- 4.3.8 Project schedule Metrics
- 4.3.9 Control Thresholds
- 4.3.10 Scheduled Control

The Schedule Management Plan defines and describes how to manage the project schedule throughout the project lifecycle. The plan outlines the guidelines and identifies the tools and techniques for the planning, managing, executing, and controlling the project schedule. The development of the project schedule took into account the work required to achieve the project objectives and deliverables. It also considers the resources required and the timeframe for the completion of the project work. The development of the schedule-included information from the approved Concept Note, Project Charter, Scope Management Plan, and other information obtained from interviews and stakeholder meetings.

4.3.1 Workflows and Activities

Provided below is a list of the workflows and activities related to the management of the project schedule. The below list of tasks defines the procedures for implementing and managing of the project schedule, which is based on a Schedule Management template developed by PM2 Alliance <http://pm2alliance.eu/publications>.

- **Plan Schedule Management** – is a process of establishing the policies, procedures, and documentation for planning, developing, managing, executing, and controlling the project schedule.

- **Develop Project Schedule** – is an integrated process consisting of defining activities, sequences, estimating and analyzing activity durations, required resources, and schedule constraints to complete the project deliverables.

- **Monitor and Control Schedule** – the process of monitoring and reporting on the progress of project activities, managing progress, and changes to the schedule baseline to achieve project objectives. If necessary, based on factors such as project size and complexity, the process may be broken down into sub-processes such as:
 - **Schedule Activity and Progress Updates** – the process of establishing how to document project activity and progress updates.

- **Schedule Monitoring** – comparing the schedule progress updates is with the schedule baseline.

- **Schedule Control** – the process of establishing the control tools and techniques for managing the schedule and how changes to address.

- **Schedule Reporting** – the process of defining what schedule reporting metrics and reports are necessary for the project, the reporting intervals, and audiences.

4.3.2 Roles and Responsibilities

Chart 15 identifies the roles and responsibilities of stakeholders related to the execution and management of the plan.

Chart 15.*Schedule Roles and Responsibilities Matrix*

Role	Responsibilities
Project Sponsor	<ul style="list-style-type: none"> • Review and approve schedule baselines. • Review and approve schedule progress reports. • Approve schedule changes through the change control process. • Provide overall project guidance.
Project Steering Committee	<ul style="list-style-type: none"> • Review and submit schedule baselines to the sponsor for approval. • Review schedule progress reports. • Review and approve time estimates for the project team. • Work with the project manager on resource schedule issues. • Recommend schedule changes to the sponsor. • Address schedule risks. • Communicate schedule changes to the project manager.
Project Manager	<ul style="list-style-type: none"> • Along with the project team, develop the Schedule Management Plan and Schedule. • Provide status updates on the schedule performance. • Recommend schedule changes to the PSC. • Review, analyze, and manage the project schedule. • Communicate approved schedule changes to the project team members. • Reports on the schedule deviation.

Chart 15. <i>Schedule Roles and Responsibilities Matrix (continues)</i>	
Technical experts	<ul style="list-style-type: none"> • Assist the project manager with the development of the project schedule. • Report on the project schedule progress to the project manager. • Make recommendations to the project manager on project schedule changes. • Assist with the identification of project schedule risks.
Project team	<ul style="list-style-type: none"> • Review project schedule. • Assist the project manager to develop the Schedule Management Plan and Project Schedule • Provide progress reports to the project manager. • Recommend schedule changes to the project manager.
Ministry of Education	<ul style="list-style-type: none"> • Review and provide input into the development of the project schedule
Project Secretary	<ul style="list-style-type: none"> • Assist the project manager and project team with requesting project updates. • Support the project team with the execution of its duties.

Source. Author's own elaboration (2021)

4.3.3 Schedule Management Process

The Project Charter, WBS, WBS Dictionary, Resource Requirements, and the Scope Management Plan provided inputs for the developing of the Schedule Management Plan. The process accounts for the sequencing of project work and

dependencies as outlined in the WBS Dictionary. The schedule for the project will be managed at the individual task level as identified in the WBS. Staff time durations will be measured in terms of hours/days as determined by the schedule. In this regard, the critical path method will be used to control and monitor the schedule. The project manager is responsible for executing the project schedule; this requires the review by the PSC and approval of the project sponsor. The PSC will communicate any changes to the schedule to the project manager, who will log the changes approved.

4.3.4 Schedule Development

Microsoft Projects was used to develop the Project Schedule as a Gantt chart (see Chart 22). The project manager and the project team worked together to identify the task durations for each task. An analysis of the dependencies will determine the order of the work to be undertaken. The associated activities' predecessor and successor tasks were assigned at the activity level. A project calendar (see Chart 16) was developed as the baseline for the project duration estimates.

Chart 16.*Project Calendar*

Project Calendar	
Project Start Date: May 10 th , 2021	
Project End Date: September 12 th , 2022	
Hours of work: 9hours	
Lunchtime: 1 hour per day	
Workweek: 40 hours (Monday –Friday)	
Average monthly workdays: 21	
InWork hours: 8:00am – 5:00pm, 1:00pm – 5:00pm	
Non-working days for project duration: 14	
Non-working days/holidays	Date
Whit Monday	May 24 th , 2021
Carnival Monday	August 2 nd , 2021
Carnival Tuesday	August 3 rd , 2021
Independence Day	November 1 st , 2021
V.C. Bird Day	December 9 th , 2021
Christmas Day	December 25, 2021 (Observed Mon Dec 27)
Boxing Day	December 26, 2021 (Observed Tue Dec 28)
New Year's Day	January 1 st , 2022
Good Friday	April 15 th ,2022
Easter Monday	April 18 th , 2022
Labour Day	May 2 nd , 2022
Whit Monday	May 30 th , 2022
Carnival Monday	August 1 st , 2022
Carnival Tuesday	August 2 nd , 2022

Source. Author's own elaboration (2021)

4.3.5 Units of Measure and Level of Accuracy

In developing the schedule, assigned tasks were linked together to identify the relationships between deliverables and sub-deliverables.

Therefore, the dependencies used to develop the project schedule include:

- **Finish-to-Start (FS):** The initiation of the successor activity depends upon the completion of the predecessor activity.
- **Finish-to-Finish (FF):** The completion of the successor activity depends upon the completion of the predecessor activity.
- **Start-to-Finish (SF):** The completion of the successor activity depends upon the initiation of the predecessor activity.
- **Start-to-Start (SS):** The initiation of the successor activity depends upon the initiation of the predecessor activity.

The development of the schedule followed the process outlined below:

- a. All tasks should also have at least one successor and one predecessor.
- b. There should be no unlinked tasks.
- c. Start and finish dates should be included in the schedule.
- d. All dependencies should be linked to a detailed task or deliverable.
- e. The earliest and latest date on which a task can start or finish using a time analysis approach, provided for in MS projects.

Analogous estimates and expert judgment were used to prepare the task durations. Thus, analogous estimating was chosen since it was less risky to determine the duration of the project tasks. Expert judgment based on past project experience and

knowledge of the work and actions required to fulfill each deliverable were used as a baseline for the development of the schedule.

Chart 17.

Activities List and Duration Estimates

Task Name	Duration	Milestone	Start	Finish	Predecessors
Improve Capacity of ABNTA & ABICE to issue CVQs	341 days		Mon 5/10/21	Fri 9/16/22	
Project Planning	95 days	Yes	Fri 6/18/21	Tue 11/2/21	
stakeholder consultation	4 days	No	Fri 6/18/21	Wed 6/23/21	
project development	5 days	No	Thu 6/24/21	Wed 6/30/21	3
project submission to sponsor	7 days	No	Thu 7/1/21	Fri 7/9/21	4
project review	5 days	No	Mon 7/12/21	Fri 7/16/21	5
project approval	7 days	No	Mon 7/19/21	Tue 7/27/21	6
Project Management	44 days	Yes	Mon 7/19/21	Mon 9/20/21	
project initiation	5 days	No	Mon 7/19/21	Fri 7/23/21	6
project process	10 days	No	Mon 7/26/21	Tue 8/10/21	9
project documentation	10 days	No	Wed 8/11/21	Tue 8/24/21	10
project baseline	12 days	No	Wed 8/25/21	Thu 9/9/21	11
project scope approval	7 days	Yes	Fri 9/10/21	Mon 9/20/21	12
Procurement	30 days	Yes	Tue 9/21/21	Tue 11/2/21	
IT Expert	30 days	Yes	Tue 9/21/21	Tue 11/2/21	13SS
TVET Policy Expert	30 days	Yes	Tue 9/21/21	Tue 11/2/21	13SS
Legal Expert	30 days	Yes	Tue 9/21/21	Tue 11/2/21	13SS
Training Expert	30 days	Yes	Tue 9/21/21	Tue 11/2/21	13SS
Purchase of Hardware and software	30 days	Yes	Tue 9/21/21	Tue 11/2/21	13SS

Chart 17.*Activities List and Duration Estimates (continues)*

Project Launch	6 days	Yes	Mon 10/11/21	Mon 10/18/21	
Kick-Off Press Conference	1 day	Yes	Mon 10/11/21	Mon 10/11/21	
Stakeholder Workshop	5 days	No	Tue 10/12/21	Mon 10/18/21	21
Training and Certification	50 days	Yes	Mon 10/11/21	Tue 12/21/21	
Selection of Trainees	20 days	No	Mon 10/11/21	Mon 11/8/21	
Application Process	30 days	No	Tue 11/9/21	Tue 12/21/21	24
Training	160 days	Yes	Mon 10/11/21	Thu 6/2/22	
CBET Methodology Training	15 days	Yes	Mon 10/11/21	Fri 10/29/21	
Internal Verifiers Training	15 days	Yes	Tue 11/2/21	Mon 11/22/21	27
external Verifiers Training	15 days	Yes	Tue 11/23/21	Tue 12/14/21	28
Assessors Training	15 days	Yes	Wed 12/15/21	Fri 1/7/22	29
Facility Audit Training	15 days	Yes	Mon 1/10/22	Fri 1/28/22	30
Financial Admissions & Institution Training	15 days	Yes	Mon 1/31/22	Fri 2/18/22	31
Records Management Training	20 days	Yes	Mon 2/21/22	Fri 3/18/22	32
Mentorship Training	15 days	Yes	Mon 3/21/22	Fri 4/8/22	33
certification	35 days	Yes	Mon 4/11/22	Thu 6/2/22	34
Site Visit and Audit of 12 Programmes	60 days	Yes	Fri 6/3/22	Mon 8/29/22	26
Media Engagements	314 days	Yes	Tue 10/19/21	Mon 1/16/23	
Information sharing Conference	12 days	No	Tue 10/19/21	Thu 11/4/21	21,22
Print information Materials	20 days	No	Fri 11/5/21	Thu 12/2/21	38
distribution of printed materials	30 days	No	Fri 12/3/21	Wed 1/19/22	39
media engagements	25 days	No	Thu 1/20/22	Wed 2/23/22	40

Chart 17.*Activities List and Duration Estimates (continues)*

social media updates	160 days	No	Fri 6/3/22	Mon 1/16/23	41SS,8SS,14SS,26SS,36SS
Project Closure	150 days	Yes	Mon 10/11/21	Wed 5/18/22	
contract closure	40 days	Yes	Mon 10/11/21	Mon 12/6/21	
project review	110 days	Yes	Tue 12/7/21	Wed 5/18/22	44

Source. Author's own elaboration (2021)

4.3.6 Estimate Activity Resources

The PERT technique as outlined would be used to determine the duration of the activities.

$$\text{PERT} = (O + 4ML + P) \div 6$$

Where: O is the OPTIMISTIC

ML is the MOST LIKELY duration

P is the PESSIMISTIC value

This formula would provide the project team with a more statistically accurate picture of the project schedule and duration of the project activity. Thus the development of the schedule assists the project team with determining the timeframe for the use of the project resources.

Chart 18.*Estimate Duration Template*

WBS ID	Optimistic Duration	Most Likely Duration	Pessimistic Value	Expected Estimates

4.3.7 Gantt Chart

Chart 19. Project Gantt Chart

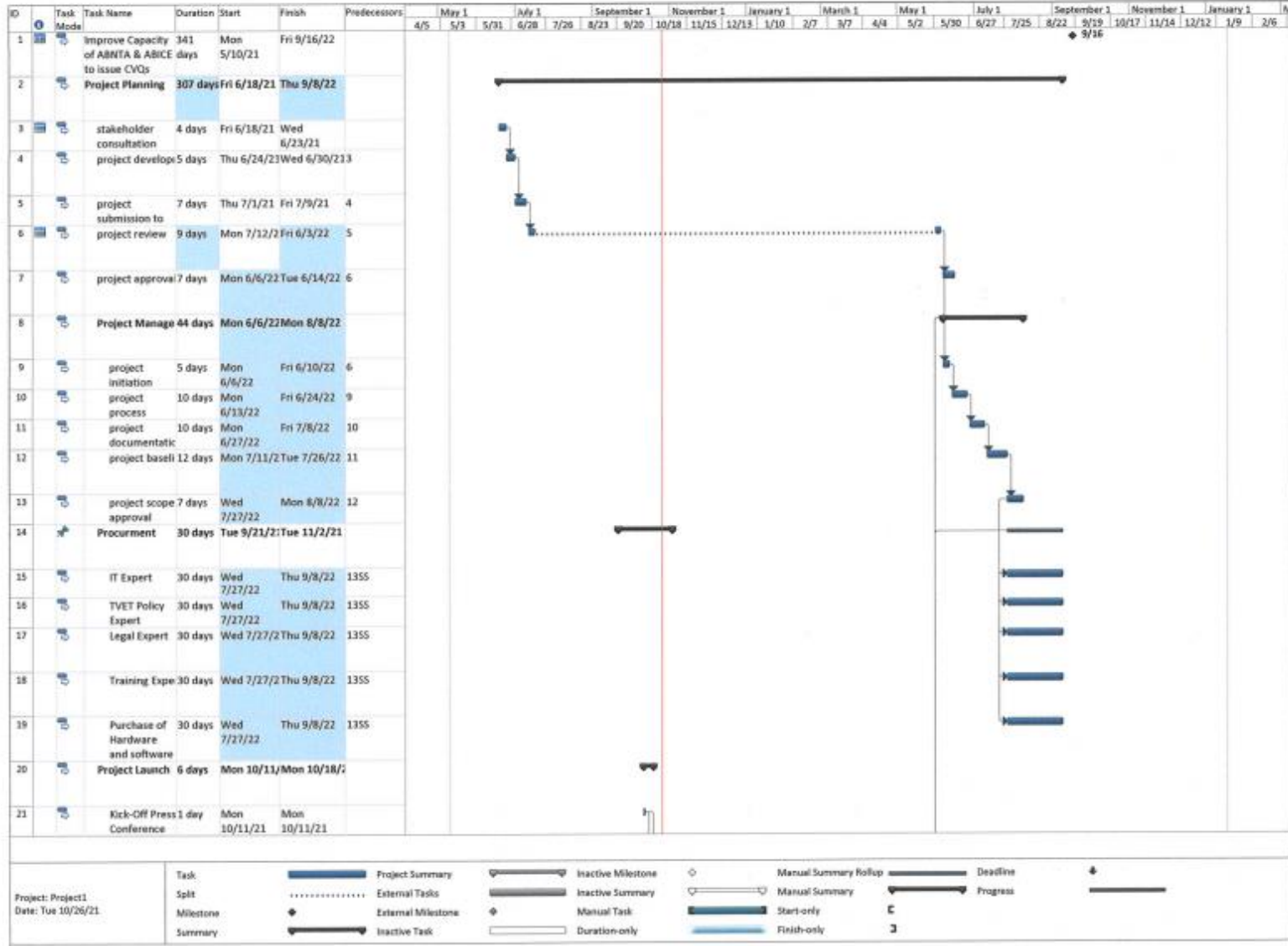
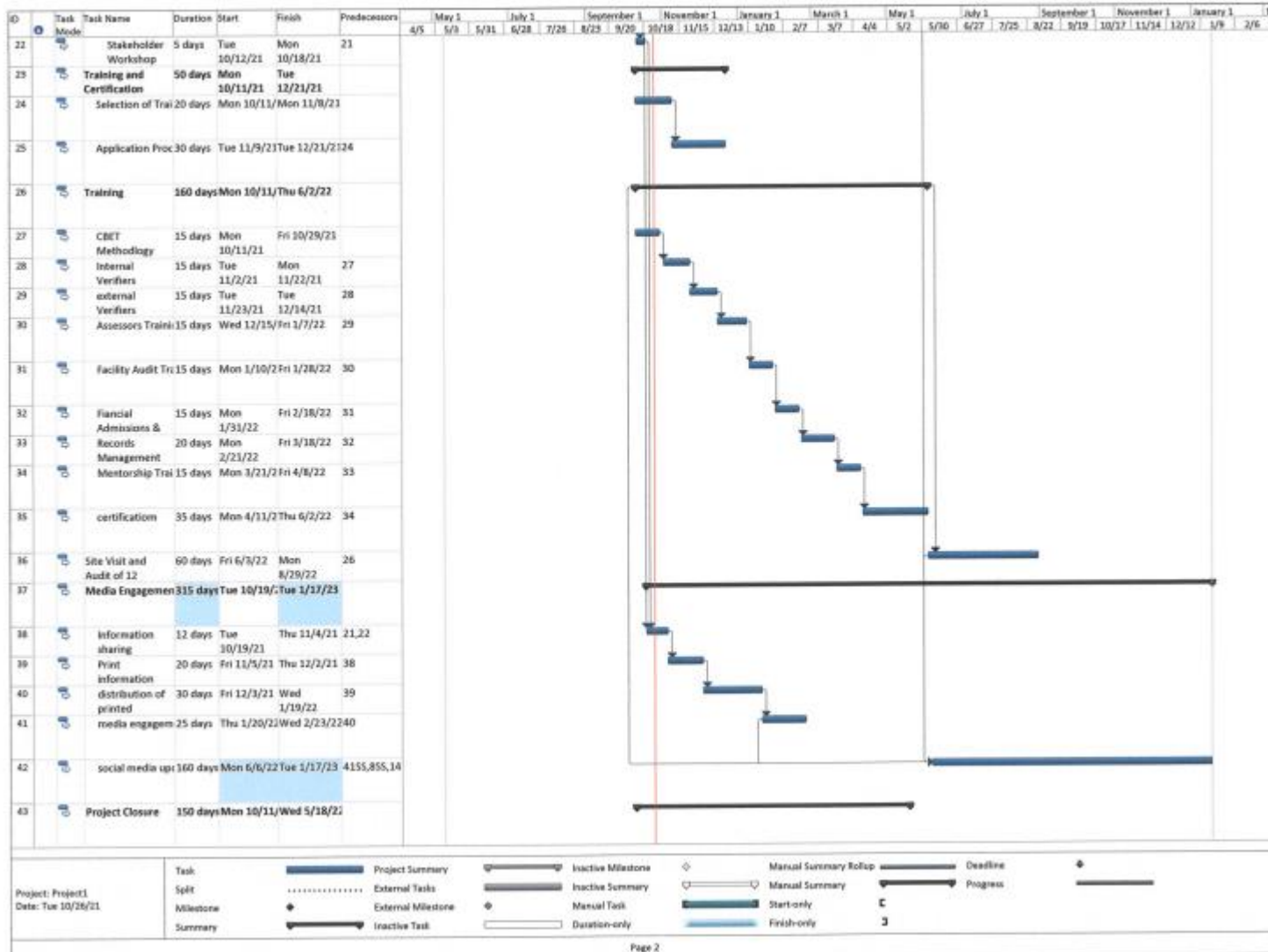
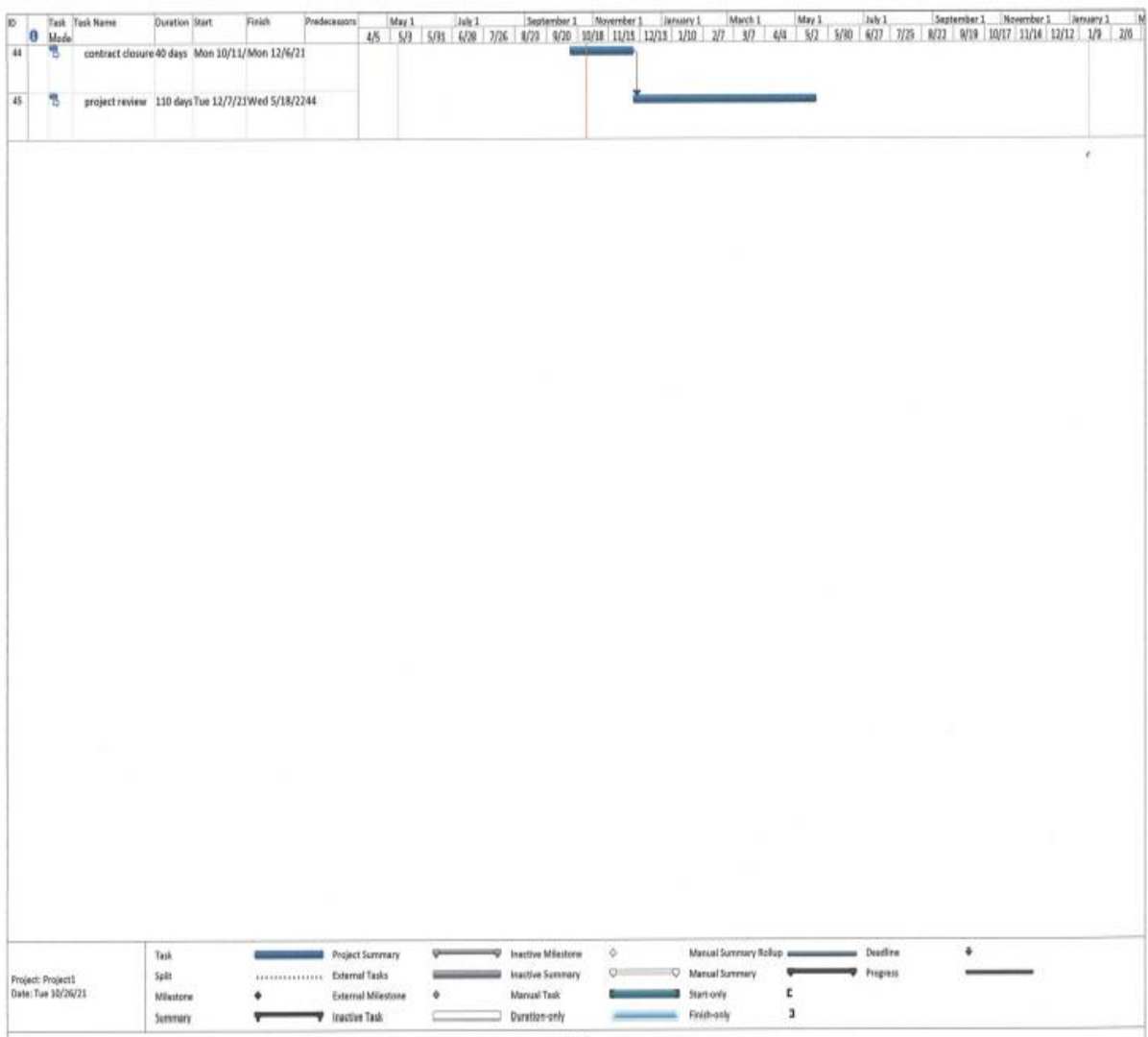


Chart 19. Project Gantt chart (continues)





Source. Author's own elaboration (2021)

4.3.8 Project Schedule Matrix

The project uses the Earned Value Management (EVM) methodology to integrate schedule, cost, and scope to measure the project performance. The use of this methodology enables the project manager to evaluate, predict, and adjust project performance. Once the project team determines that 20% of the project has been implemented the EVM would be used to predict the future of the project with a plus and minus 10% deviation. This approach allows for the benchmarking and comparing the status against the project baseline to determine its critical paths. Therefore, the following measurements used to track and report on the project performance include:

- Schedule Variance (SV)
- Planned versus actual Task using Schedule Performance Index (SPI)
- Estimate to Complete (ETC)

4.3.9 Control Thresholds

The schedule variance threshold controls the project's schedule performance. The project manager and team are responsible for reviewing and evaluating any changes to the schedule. In this regard, the project team will identify the affected tasks, calculate the variance, and recommend an alternative for the consideration and endorsement of the PSC. This process will be undertaken using the following metrics:

- Schedule Variance (SV) to be reported monthly

- Schedule Performance Index (SPI) to be reported monthly

The analysis of the SPI is guided by the principle, that if the variance is between 0.9 and 1.0 or above 1.2, the project manager must provide the PSC with a report detailing the reasons for the exceptions. In addition, if the SPI has a value less than 0.9, the project manager would be required to provide a report to the PSC outlining the corrective actions, including the cost implications and the associated risks.

4.3.10 Schedule Control

The scope baseline is the basis for controlling the schedule. Any changes to the scope and schedule will follow the established change management process for the project. Therefore, the schedule control process takes account of all changes and corrections to the schedule variance that will affect the implementation, cost, scope, and quality. Guided by the use of the following techniques the schedule control definitions include:

Chart 20.

Schedule Control Techniques

Technique	Definition
Performance Reviews	Performance reviews measure, compare, and analyze schedule performance, such as actual start and finish dates, percent complete, and remaining duration for the work in progress.

Chart 20. <i>Schedule Control Techniques</i>	
Critical Path Method	<p>Critical Path - to predict project duration by analyzing the sequence of activities (network path) that has the least amount of scheduling flexibility. Earlier dates are calculated by using a specified start date and later dates are calculated by starting from the specified completion date.</p> <p>The critical path will be reviewed:</p> <ul style="list-style-type: none"> • Monthly when entering a new project phase, and addressing risk
Adjust Leads and Lags	<p>Lead -- A modification of a logical relationship that allows an acceleration of the successor activity. For example, when a task has a finish-to-start dependency with a 10-day lead, the successor activity can start as much as 10 days before the predecessor activity has finished.</p> <p>Lag -- A modification of a logical relationship that directs a delay in the successor activity. For example, when a task has a finish-to-start dependency with a 10-day lag, the successor activity cannot start until 10 days after the predecessor activity has finished.</p> <p>Adjusting leads and lags to find ways to align lagging project activities with the plan.</p>

Source. Author's own elaboration (2021)

The monitoring of the project schedule includes the use of the Schedule Variance (SV) and the Schedule Performance Variance (SPV). The matrices will analyze the project's schedule performance by comparing the actual performance against the schedule baseline at each phase throughout the project's life cycle. The data obtained from this process provides valuable information for a change request, identification of new risk, resources, and cost analysis of the overall project.

Based on their assigned tasks, the project team members will report to the project manager monthly. Consequently, update monthly the project schedule will reflect actual project performance. The schedule control process will include a structured reporting format that requires the project manager to provide monthly reports to the PSC and sponsor on the project schedule incorporating the resource requirements per work packages and updates to the Gantt chart.

4.4 Cost Management Plan

Improve the Capacity of the National Training Agency (NTA) and the Antigua and Barbuda Institute of Continuing Education (ABICE) to Issue National and Caribbean Vocational Qualifications Project

Identification Number: GTA/AB/345/21-22

Prepared By: Barbara Williams, Project Manager

Document Version:

Approved by Project Sponsor: _____
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Approved by PSC Chair: _____
Date: _____

Abstract: The Cost Management Plan for this project outlines the process and procedure to plan, fund, and control project cost. The purpose of the plan is to determine the budget needed for the execution of the project. It also identifies the required resources to complete the project activities based on the schedule and resources required. The Plan was developed based on a template from <https://www.projectmanagementdocs.com/template/project-planning/cost-management-plan/#axzz7AfQ7Fv4O>

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The Cost Management Plan for this project outlines how to plan, fund, and control the project cost. The purpose of the plan is to determine the budget needed for the execution of the project. It also identifies the required resources to complete the project activities based on the schedule and resources required.

The Plan's development emerges from the Project Charter, Scope Management Plan, and Schedule Management Plan. This approach allows the project management team to determine the complete project expenditure. Expert judgment, interviews, and

industry knowledge provided other inputs into this process, including analogous estimating.

The Cost Management Plan identifies who is responsible for managing cost, how to measure cost performance and who authorizes changes to the project budget.

4.4.1 Cost Management Approach

In the planning phase of the project cost, it is essential that the project team establishes control thresholds. Accordingly, variance thresholds would be used to monitor cost performance with an agreed-upon variation to be allowed before action is taken. Additionally, the Earned Value Management (EVM), performance measurement would be established for the project, it will define the points at which such measurements would be conducted through fixed formulas.

On the other hand, the project cost estimate would be developed based on a quantitative assessment of the likely cost for resources required to complete each project activity. To improve the cost estimates, three-point estimating would be used to define a range of activity costs; this includes the most likely cost (cM), optimistic (cO), and pessimistic cost (cP) PMI (p. 244).

According to PMI (2017, p.248), the development of the budget is the aggregation of the estimated cost of the work packages towards the development of the cost baseline

To monitor the cost, schedule, and quality of all activities an earned value, variance and trend analysis would be performed for the established milestones dates for the project. The results of the analysis would be presented as part of the reporting requirements for the project and submitted to the EU to authorize the disbursement of project funds.

4.4.2 Roles and Responsibilities

Chart 21 shows the roles and responsibilities as it relates to project Cost Management Plan:

Chart 21.

Cost Roles and Responsibilities

Role	Responsibility
Sponsor	<ul style="list-style-type: none"> • Approval of the project budget. • Disbursement of project funds. • Reviewing and approving the Cost Management Plan. • Approving and authorizing additional funding for the project.
PSC	<ul style="list-style-type: none"> • Review the Cost Management Plan. • Review the project budget. • Make requests for disbursement of project funds from the sponsor. • Review all requests for additional funding for the project. • Review and make recommendations on budget changes. • Review all cost variance and schedule performance for the project.
Project Manager	<ul style="list-style-type: none"> • Manage and report to the PSC on project cost. • Provide the PSC with monthly reports of the project cost. • Reporting to the PSC on project cost deviations.

Chart 21.	
<i>Cost Roles and Responsibilities</i>	
Financial Manager – project team	<ul style="list-style-type: none"> • Develop and provide the project manager with monthly reports on the project cost. • Prepare and provide the project manager with monthly reports on project cost deviations. • Make recommendations to the project manager to address project deviations. • Establish metrics and variance analysis of the project cost. • Execute authorized project expenditure. • Provide the project manager with all requests for changes to the project budget.
Procurement Specialist – project team	<ul style="list-style-type: none"> • Assist the financial manager and the project manager with monitoring of the project expenditure related to goods and services to be procured. • Provide the financial manager with reports on the procurement process. • Provide input into the variance analysis reports of the financial manager. • Execute assigned work by following the Cost Management Plan.
Ministry of Education – beneficiary	<ul style="list-style-type: none"> • Review the cost management plan. • Review the project budget. • Provide internal support to the execution of the project as required.
ABICE	<ul style="list-style-type: none"> • Review the cost management plan. • Review the project budget. • Provide internal support to the execution of the project as required.
ABNTA	<ul style="list-style-type: none"> • Review the cost management plan. • Review the project budget. • Provide internal support to the execution of the project as required.

Source. Author's own elaboration (2021)

4.4.3 Cost Planning and Estimating

The development of the cost planning process included the objectives and deliverables of the project. A cost estimating process used to finalize the project's resources include the consultancy services, training, certification activities, marketing, and public relations, training hardware, and software, and contingency cost. Since the project is being implemented through a grant no management reserve was included as part of the financing agreement for the project. Consequently, the budget includes a 10% contingency reserve, and only the sponsor can authorize its use.

The budget was developed based on the activity level using the WBS, which were totalled to form the request for funding and the overall project budget. The development of the budget used the EU standard figures for the project team's professional fees. The budget was converted to Eastern Caribbean Dollars (XCD); this allows for easy transfer of the project funds to Antigua. The cost baseline will be used to measure and monitor the project's cost performance. Additionally, the project sponsor is responsible for approving changes to the project cost baseline.

4.4.4 Project Budget

The project budget takes account of the cost of the project activities of the project work packages. The development of the project budget establishes the cost baselines for the project, which assists the financial manager to monitor and control performance. The information used to develop the budget includes the basis of estimates, cost

estimates, project schedule, and the risk register. Additionally, the tools and techniques used in developing the budget; include expert judgment, data analysis, historical information review, and cost aggregation.

Once the sponsor approves the budget, it would be used for comparing planned versus actual costs. Accordingly, the project's financial manager is responsible for producing the reports.

Chart 22.								
<i>Project Budget</i>								
Budget Plan								
Project Duration	Phases 1,2 &3	15 months					Overall Initial Budget	XCD\$1,540,000
Closing and Documentation	Phase 4	1 month					Mid-Term and End of Project review	XCD\$50,000
Project + Closing Duration	Phases 1-4	16 months						
Category	Resources or Services Category	Funds allocated to Resource or Service	% of Funds to be released per phase				Comments	
			Phase 1 (5 months)	Phase 2 (5 months)	Phase 3 (5 months)	Phase 4 (1 month)		
Project Team	Project Manager	\$96,000	31.25%	31.25%	31.25%	6.25%	Fixed Monthly Instalments for Salaries at \$6000 p/m for 16 months	
	Financial manager	\$80,000	31.25%	31.25%	31.25%	6.25%	Fixed Monthly Instalments for Salaries @ EC\$5000p/m for 16	

							months
	Education Specialist & Quality Assurance	\$80,000.	31.25%	31.25%	31.25%	6.25%	Fixed Monthly Instalments for Salaries @ EC\$5000p/m for 16 months
	Communication Specialist	\$80,000	31.25%	31.25%	31.25%	6.25%	Fixed Monthly Instalments for Salaries @ EC\$5000p/m for 16 months
	Procurement Specialist	\$80,000	31.25%	31.25%	31.25%	6.25%	Fixed Monthly Instalments for Salaries @ \$5000p/m for 16 months
	Project Secretary/Assistant	\$48,000	31.25%	31.25%	31.25%	6.25%	Fixed Monthly Instalments for Salaries @\$3,000p/m for 16 months
Project Planning	Stakeholder Consultations	-	100%	-	-	-	Budget allocations included in the telecommunication, office materials supplies, and facilities areas of the budget
	Project Development	-	100%	-	-	-	No specific budget allocation included as part of the professional fees of the project

							team
	Project submission to sponsor	-	100%	-	-	-	No specific budget allocation included as part of telecommunications, office materials
	Project review	-	100%	-	-	-	No specific budget allocation included as part of the professional fees of the project team
	Project Agreement	-	100%	-	-	-	No specific budget allocation included as part of the professional fees of the project team
Project Management	Project initiation and development activities	-	100%	-	-	-	No specific budget allocation included as part of the professional fees of the project team
Procurement – Technical Experts	IT Expert	\$30,000	50%	30%	20%	-	Fixed negotiated retainer
	TVET Policy Expert	\$40,000	60%	40%	-	-	Fixed negotiated retainer
	Legal Expert	\$50,000	60%	40%	-	-	Fixed negotiated retainer
	TVET Training Institution	\$70,000	60%	40%	-	-	Fixed negotiated retainer

	Education and Policy Specialist	\$36,000	50%	20%	20%	10%	Fixed negotiated retainer
Procurement – Computer hardware and software	Laptops for project team members	\$12,000	100%	-	-	-	\$2,400 per laptop for 5 staff members, brought new to maximize productivity and performance. At the end of the project, the laptops would become the property of ABICE for use by their staff.
	Training hardware	\$120,000	50%	50%	-	-	To be used for theoretical training. 50 computers will be purchased to furnish 2 training labs.
	Training software	\$8,000	100%	-	-	-	Procurement of training software
	Office Printer	\$20,000	50%	50%	-	-	Upgrade to offer in house high-quality prints
Project Launch	Kick-off Press Conference	\$3,000	100%	-	-	-	Payment for the use of the conference room.
	Stakeholder Workshop – Project Overview	\$5,000	100%	-	-	-	Payment for the use of workshop space.
	Printing of press information kits	\$6,000	100%	-	-	-	Printing of information press kits for the launch of the project.

Training and Certification	Application for training	-	-	-	-	-	Application forms would be circulated and received electronically.
	Selection of trainees	-	-	-	-	-	Application forms would be circulated and received electronically. Allocated include office supplies, telecommunication, and utilities.
	25 persons trained in CBET methodology	\$7,000	100%	-	-	-	This budget allows for the refreshments and printing of training materials.
	25 persons trained and certified as assessors	\$7,000	100%	-	-	-	This budget allows for the refreshments and printing of training materials
	25 persons trained and certified as internal verifiers	\$7,000	-	100%	-	-	This budget allows for the refreshments and printing of training materials

	25 persons trained and certified as external verifiers	\$7,000	-	100%	-	-	This budget allows for the refreshments and printing of training materials
	1 Facilities Audit Training completed and 5 persons trained	\$4,000	100%	-	-	-	This budget allows for the refreshments and printing of training materials
	Financial Admissions and Institutions Training completed and 5 persons trained	\$4,000	100%	-	-	-	This budget allows for the refreshments and printing of training materials
	1 Records Management in Institutions training completed and 5 persons trained	\$4,000	-	100%	-	-	This budget allows for the refreshments and printing of training materials
	Site visit and audit of 12 programmes	-	-	-	-	-	No budget allocation, as this activity is included in the professional fees for the Education 7 Quality Assurance project team member.

	1 Mentorship/ Skills Development workshop completed and train 20 persons	\$7,000	-	100%	-	-	This budget allows for the refreshments and printing of training materials
	Training materials	\$15,000	50%	30%	20%		Design and development of training materials
	Testing	\$6,000	30%	50%	20%	-	Verification and accreditation of
	Certification issuances	\$9,000	30%	50%	20%	-	Design and printing of certificates
Marketing &	Marketing and Media Newspaper Social Media etc.	\$81,600	30%	20%	40%	10%	Monthly Instalments of \$5,100.00 during phases 1- 4.
Public Relations	Information sharing Conferences, Workshops etc.	\$80,000	50%	30%	20%	-	Fixed retainer @ \$5000 during phases 1 -4.

	Website development	\$40,000	60%	30%	20%	-	Design and maintenance during the project duration
	Publication of information pamphlets	\$60,000	50%	30%	20%	-	Based on the negotiated price, for the development of 4 subject-specific 10-page pamphlets on TVET areas.
	Media engagements	-	-	-	-	-	No cost is associated with media interviews
	Social Media updates	-	-	-	-	-	Included in the budget allocation for the IT expert
	Radio & Television Advertisements	\$25,000	50%	30%	20%	-	Based on negotiated price for the airing of 1-2 minutes information audio and video advertisement, including editing. In phase 2, video and audio advertisements would be developed and aired.
Telecommunications Facilities	Phone talk and data plans	\$10,080	Fixed monthly payments	Fixed monthly payments	Fixed monthly payments	Fixed monthly payments	Fixed monthly bill payments for the project team at \$105.000

	Online communication software	\$8,000	100%				
Facilities	Office Space Rentals	\$90,320	34.75%	56.00%	3.00%	6.25%	Monthly rent \$8,000 for office space with conference room
	Office utilities	\$24,000	34.75%	56.00%	3.00%	6.25%	Monthly utility estimated costs at \$1,500.00
Office Materials and Supplies Hardware Tools	Stationery	\$8,000	34.75%	56.00%	3.00%	6.25%	Stationery costs \$500.00 per month
	Printer ink	\$16,000	34.75%	56.00%	3.00%	6.25%	Based on 1 cartridge at \$1,000 per month
	Operational goods	\$8,000	34.75%	56.00%	3.00%	6.25%	Office refreshments, sanitary and cleaning products at a rate of \$500.00 per month
Contingency		\$140,000					Based on 10% of Initial Budget allowance to be used as an emergency fund.
Project Cost		\$1,400,000					
Total Project Cost		\$1,540,000					

Source. Author's own elaboration (2021)

4.4.5 Measuring Project Cost and Reporting

Earned Value Management (EVM) would be used to measure project performance. Therefore, the following four EV metrics used to evaluate the project's cost performance include.

- i. **Schedule Variance (SV)** – this measures the amount by which the project is ahead or behind. This results of this measure is to be reported monthly and calculated by $SV=EV-PV$. The financial manager is responsible for making corrective actions and makes appropriate recommendations to the project manager for review by the PSC, and approval of the sponsor.
- ii. **Cost Variance (CV)** – this measures the projected deficit or surplus and is reported monthly by the project's financial manager. It is calculated by $CV=EV-AC$. The financial manager is responsible for making corrective appropriate recommendations to the project manager for review by the PSC, and approval of the sponsor.
- iii. **Schedule Performance Index (SPI)** – this metrics measures the efficiency of the schedule calculated by $SPI=EV/PV$.
- iv. **Cost Performance (CPI)** – this measures the cost efficiency of the budgeted resources calculated by $CPI=EV/AC$.

Where the SPI or the CPI has a variance between 0.1 and 0.2, the project's financial manager must provide a report justifying the exception. Additionally, if the SPI or the CPI has a variance greater than 0.2, the project's financial manager must provide a report to the project manager giving reasons for the exception, and outline the corrective actions required to bring the project performance back to an acceptable level. The project manager will review and evaluate the reports developed by the financial manager, before the sponsor review and or approves or rejects the recommendations.

4.4.6 Cost Controls

To be deemed successful, a project must deliver on the requirements and scope, completed within schedule and budget, and the quality standards and requirements met. Therefore, the cost control process for this project involves tracking how the project's spending varies from its baseline. The cost control activities used throughout the project's lifecycle includes taking corrective actions as necessary.

This process is essential because it helps the project team to implement mechanisms to monitor cost and keep the project within budget. Within this process, the project's financial manager is responsible for monitoring and reporting the project cost, including deviations. The PSC must review all proposed cost changes before its submission to the sponsor. The sponsor has the overall authority to approve all cost changes. Upon approval of changes by the sponsor, the project manager and the financial manager will document, implement, and communicate with the project team.

However, the process of recommending changes to the budget must follow the established change control process established for the project.

For this project, the following cost control steps include the following:

- i. Monitor cost performance (actual versus planned)
- ii. Identify and investigate cost variances
- iii. Forecast final cost
- iv. Identify and document changes
- v. Adjust budget based on approved cost changes
- vi. Communicate changes to the project team and other relevant stakeholders

Additionally, based on the project's financing agreement, the beneficiary is required to reimburse the EU/project for any unauthorized spending of project funds outside the scope of the budget and beyond the budgeted amount. The financing agreement stipulates that the EU of such transactions must finalize such reimbursements within ten working days following the determination. Failure to adhere to this term would result in the project losing the unauthorized amount spent from the overall budgeted amount. Therefore, the project's financial manager and the project manager must maintain strict cost controls and avoid any loss of funds. Additionally, given the duration of the project, the financing agreement also stipulates the conducting of a mid-term and final project review by an independent consultant hired by the EU. The EU will hold fifty thousand dollars (\$50,000) for payment to an independent consulting team to review and measure project performance. The purpose of this exercise is to determine the

achievement of the project objectives. The EU is solely responsible for the procurement of the review team and the disbursement of the funds relating to the consultancy.

4.5 Quality Management Plan

Improve the Capacity of the National Training Agency (NTA) and the Antigua and Barbuda Institute of Continuing Education (ABICE) to Issue National and Caribbean Vocational Qualifications Project

Identification Number: GTA/AB/345/21-22

Prepared By: Barbara Williams, Project Manager

Document Version:

Approved by Project Sponsor:

Approved by Beneficiary:

Approved by PSC Chair:

Abstract: The Quality Management Plan addresses the quality assurance activities for the project and describes the quality policies, procedures, and criteria. The document outlines the quality strategy and approach, identifies the roles and responsibilities related to the management of quality, defines the quality assurance and control activities, and defines the quality requirements, metrics, and methods of evaluation. The Plan was developed based on a template from <https://www.pm2alliance.eu/publications>.

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 4.5.5.1 Measuring Reports

4.5.6 Quality Assurance

4.5.7 Quality Control

The Quality Management Plan addresses the quality assurance activities for the project and describes the quality policies, procedures, and criteria. The quality management process for the project includes the development of the quality policy, implementing quality planning, assurance, quality control, and improvement. Therefore, the document outlines the quality strategy and approach, identifies the roles and responsibilities related to the management of quality, defines the quality assurance control activities, the quality requirements, metrics, and evaluation methods.

The Quality Management Plan was developed with inputs from the Project Charter, the scope baseline, Requirements Management Plan, Stakeholder Engagement Plan, and the Risk Management Plan. Brainstorming, and expert judgment were the tools and techniques used to develop the plan.

Accordingly, the components of the quality management framework for this project include:

- Identifying the quality objectives
- Identify the professional training standards
- Balance quality expectations with cost and schedule

4.5.1 Quality Management Objectives

The development of the Quality Management Plan seeks to ensure that the project meets the expected results. The Plan also aims to certify the achievement and

acceptance of the deliverables by stakeholders. Therefore, the quality objectives of the project are:

1. The deliverables meet the expected requirements of the project sponsor, beneficiary ABICE, ABNTA, and other stakeholders;
2. The deliverables meet the defined quality acceptance criteria;
3. The deliverables are aligned with industry standards and best practices;
4. The quality assurance activities are achieved as planned;
5. The project processes conform to the project management standards.

4.5.2 Quality Management Process

The quality management process takes into account the activities needed to achieve the expected project objectives and results. Therefore, the TVET Training Expert, Education Specialist, Quality Assurance officers, and the project manager are responsible for establishing the quality standards for the project. Both the TVET Training Expert, the Education Specialist and Quality Assurance professionals will work together to develop the quality measure and evaluation methods for the relevant project deliverables particularly those relating to the training and audit of the twelve (12) programmes. The quality measure and evaluation methods must conform to acceptable industry standards and practices.

Consequently, the quality management process will follow the following steps:

1. **Define project quality** – identify the quality requirements for each aspect of the project. The Education Specialist and Quality Assurance project team member

and the project manager will determine the balance between cost/schedule/risk and quality of deliverables based on a cost-benefit analysis or cost of quality (CoQ).

- 2. Perform quality assurance** – in this step, the Education Specialist and Quality Assurance team member will verify the performance and compliance of the project with the defined quality requirement. This step takes into account all aspects of the training, certification, and institutional and programme audits. Additionally, the TVET Training Expert and the TVET Curriculum Developer will collaborate with the team leader to fulfill this requirement. The education and TVET experts on the project team will also be directly involved in the procurement, selection, and management of the consultants relating to the TVET Training and Education Policy consultancy.
- 3. Quality Control** – quality monitoring and control is a process that takes place throughout the project's lifecycle. This process aims to monitor the results from the quality assurance activities to evaluate the level of compliance with the project's performance. In conducting the assessment, the project manager will assess the quality control activities while validating the level of compliance with scope, schedule, and cost. In this regard, the results of the quality assurance activities would be used to improve the project quality, make change requests and take corrective or preventative actions. Therefore, changes to the Quality Management Plan would follow the project's change management process.

- 4. Performance Acceptance** – The purpose of this step is to accept the project’s deliverables. It involves the verification of each deliverable by the sponsor and the beneficiary. During this step, the project manager and the TVET Training Expert, Education Specialist, and Quality Assurance experts will prepare the project performance reports for submission to the PSC and the sponsor.

Figure 22.

Quality Management Process



Source. Author’s own elaboration (2021)

4.5.3 Quality Roles and Responsibilities

The roles and responsibilities of key stakeholders (internal and external) as it relates to the quality process for the project.

Chart 23.

Quality Roles and Responsibilities

Role	Quality Responsibility
Sponsor	<ul style="list-style-type: none"> • Review of project's quality plan and strategies. • Acceptance of completed project deliverables
PSC	<ul style="list-style-type: none"> • Review of project's quality plan and strategies. • Validation of project deliverables. • Acceptance of completed project deliverables.
Project Manager	<ul style="list-style-type: none"> • Provide oversight of the Quality Management Plan. • Communicate with the project team regarding the status of the quality plan. • Develop and track the implementation of the Plan. • Monitor milestones activities relating to the Plan. • Responsible for the quality assurance activities • Scheduling of project audits and reviews.

Chart 23. <i>Quality Roles and Responsibilities (continues)</i>	
Project team - Education Specialist & Quality Assurance	<ul style="list-style-type: none"> • Play a lead role in the development of the Quality Management Plan. • Verify the performance and compliance of the project with the defined quality requirement. • Prepare the project performance reports for review by the project manager and PSC. • Review changes to Quality Management Plan. • Conducting project audits and reviews • Oversee consultancy activities. • Responsible for performing quality control.
TVET Curriculum Developer	<ul style="list-style-type: none"> • Play a lead role in the development of the Quality Management Plan. • Verify the performance and compliance of the project with the defined quality requirement. • Prepare the project performance reports for review by the project manager and PSC. • Review changes to Quality Management Plan. • Oversee consultancy activities.
Beneficiary – Ministry of Education	<ul style="list-style-type: none"> • Provide input into the development of the Quality Management Plan. • Validate completed project deliverables. • Acceptance of completed project deliverables.
ABICE	<ul style="list-style-type: none"> • Provide input into the development of the Quality Management Plan. • Validate completed project deliverables. • Acceptance of completed project deliverables.

Chart 23.	
<i>Quality Roles and Responsibilities (continues)</i>	
ABNTA	<ul style="list-style-type: none"> • Provide input into the development of the Quality Management Plan. • Validate completed project deliverables. • Acceptance of completed project deliverables.

Source. Author's own elaboration (2021)

4.5.4 Quality Acceptance Criteria

Chart 24 describes the quality acceptance criteria relating to the project deliverables, including the method of verification:

Chart 24.*Quality Assurance Criteria*

Deliverable	Acceptance Criteria	Verification
TVET Policy and Strategy	Policy and Strategy adequately identify key policy areas for the development of the national TVET infrastructure.	The policy aligns with the regional TVET policy and the national development plan.
Draft amendments to TVET legislation	Modernization of the TVET legislation in terms of the operationalization of the institutions, regional and national TVET policy.	Approval and enactment of amendments – publication of amendments in the national gazette.
4 CBET methodology workshops and train 25 persons	Training conducted based on approved CVQ training guidelines for the issuance of certification.	100% adherence to CVQ training guidelines based on the completion of a Quality checklist review and report of the training activities, materials, and content.
4 assessors training workshop and train 25 persons	Training conducted based on approved CVQ training guidelines for the issuance of certification.	100% adherence to CVQ training guidelines based on the completion of a Quality checklist review and report of the training activities, materials, and content.

Chart 24.*Quality Assurance Criteria (continues)*

4 internal verification training workshop and train 25 persons	Training conducted based on approved CVQ training guidelines for the issuance of certification.	100% adherence to CVQ training guidelines based on the completion of a Quality checklist review and report of the training activities, materials, and content.
4 external verifiers workshop and train 25 persons	Training conducted based on approved CVQ training guidelines for the issuance of certification.	100% adherence to CVQ training guidelines based on the completion of a Quality checklist review and report of the training activities, materials, and content.
1 facility audit training workshop and train 5 persons	Training conducted based on approved CVQ training guidelines for the issuance of certification.	100% adherence to CVQ training guidelines based on the completion of a Quality checklist review and report of the training activities, materials, and content.
Mentorship and skills development sessions and train 20 persons	Training conducted based on approved CVQ training guidelines for the issuance of certification.	100% adherence to CVQ training guidelines based on the completion of a Quality checklist review and report of the training activities, materials, and content.

Chart 24.*Quality Assurance Criteria (continues)*

1 financial administration in institutions workshop and train 5 persons	Training conducted based on approved CVQ training guidelines for the issuance of certification.	100% adherence to CVQ training guidelines based on the completion of a Quality checklist review and report of the training activities, materials, and content.
1 record management in the institution training workshop and train 5 persons	Training conducted based on approved CVQ training guidelines for the issuance of certification.	100% adherence to CVQ training guidelines based on the completion of a Quality checklist review and report of the training activities, materials, and content.
<p>Practicum and certification exercises</p> <ul style="list-style-type: none"> • Conduct Assessor Certification Exercises • Conduct Internal Verifier Certification Exercises • Conduct External Verifier Certification Exercises • Conduct Training & Development Certification 	The desired number of persons trained in the areas identified based on the CVQ training guidelines.	<p>Certification issued based on the rating scale:</p> <p>80 – 100 level 5: Mastery 65 -79 level 4: Proficient 50 – 64 Level 3: Competent 35 – 49 Level 2: Not Yet Competent Below 35 Level: Not Yet Competent</p> <p>85% of the participants attained a competency level 3 or above.</p>

Chart 24.		
<i>Quality Assurance Criteria (continues)</i>		
<p>Practicum and certification exercises</p> <ul style="list-style-type: none"> • Conduct Training & Assessment Certification Exercises. • Conduct site visit evaluations/ facilities audit exercises for twelve (12) programmes. • Award CVQ certificates for successful candidates 	<p>The desired number of persons trained in the areas identified is based on the CVQ training guidelines.</p>	<p>Certification issued based on the rating scale:</p> <p>80 – 100 level 5: Mastery 65 -79 level 4: Proficient 50 – 64 Level 3: Competent 35 – 49 Level 2: Not Yet Competent Below 35 Level: Not Yet Competent</p> <p>85% of the participants attained a competency level 3 or above.</p>
<p>Implementation of training hardware and software</p>	<p>Computer hardware and software based on the technical specification.</p>	<p>Report of a Quality Checklist on the reliability of the hardware.</p>
<p>Contracting of experts and specialists:</p> <ul style="list-style-type: none"> • Legal Drafter • Education Policy Specialist • TVET Training Institution 	<p>Consultants meet the experience and qualifications requirements approved in the terms of reference.</p>	<p>Fulfillment of the scope of work – Report of the training sessions verified by the Education Specialist & Quality Assurance.</p>

Source. Author's own elaboration (2021)

4.5.5 Quality Metrics and Measurements

The quality metrics assess the project deliverables and are used to review and evaluate the project's level of quality. Additionally, the metrics analyses the needed resources, cost, time, scope, and quality.

Chart 25.

Quality Metrics and Measurements

Quality Area	Metric	Measurement	Threshold Tolerance
Change Control	Number of Opened & Closed Change Requests	Total new change requests approved, rejected, or deferred during the reporting period.	No tolerance threshold. Reported weekly.
Schedule	SPI	EV/PV	SPI must be one or greater, or else less work is being completed than the planned work. The project is behind schedule.
Consultancies	Contractual Deliverable Timeliness	Number of Deliverables submitted on time per reporting period.	Reported monthly

Chart 25.*Quality Metrics and Measurements (continues)*

Training and certification	The number of persons participating in the training workshops.	CVQ Training Guidelines and grading scale.	Reported weekly
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Source. Author's own elaboration (2021)

4.5.5.1 Measurement Reports**Chart 26.***Project Measurement Reports*

Report Name	Frequency	Tolerance
Project Status Meetings	Monthly	
Project Review Meetings	Weekly	
Project Steering Committee Meetings	Monthly	Monthly
Milestones reviews	Per milestone	No tolerance
Phase-exit review	Per phase exit	No tolerance
Project and process audits	Quarterly	No tolerance
Audits of contractor's project quality activities	Monthly	No tolerance

Chart 26.		
<i>Project Measurement Reports</i>		
Project acceptance review	Based on the achievement of each deliverable	Based on the achievement of each deliverable
Validation of acceptance	Based on the achievement of each deliverable	Based on the achievement of each deliverable
Stakeholders satisfaction reports	Quarterly	No tolerance

Source. Author's own elaboration (2021)

4.5.6 Quality Assurance

The perform quality assurance steps and actions uses a systematic approach. These quality assurance steps are actions that will increase the likelihood of achieving the deliverable quality targets/milestones. In this regard, the quality assurance actions related to this project include the following:

1. Clear roles, responsibilities, and qualification requirements for the project team.
2. Frequent communication based on established standard operating procedures among the project team, PSC, and internal and external stakeholders.
3. Articulated scope of work, qualification, and experience requirements for each consultant.

4. Correct use of the CVQ training guidelines to conduct training workshops.
5. Implementation of the CVQ grading scale to measure the competencies of trainees.
6. Conduct Surveys to determine the progress of training sessions.
7. Implementation of checklist to measure the technical specification of the computer training hardware and software.
8. Adherence with international best practices for TVET training.
9. Acceptance and validation reports of project deliverables.
10. Conduct risk, schedule, and cost analysis
11. Performing formal Change Control to minimize the likely number of quality issues

4.5.7 Quality Control

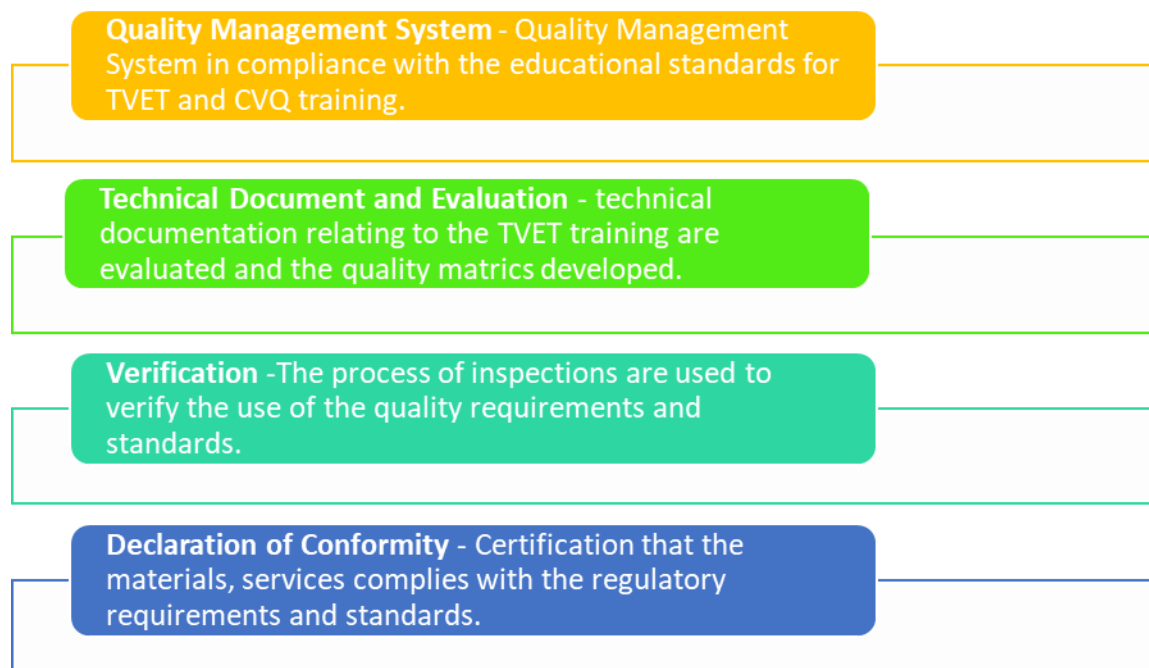
Control quality involves activities that evaluate that the deliverables are achieved based on the project's established quality requirements and plans. Information from the quality metrics, quality checklist, stakeholder requirements, and work performance data (including KPIs) forms part of this process. The control quality creates quality control measurements, validates changes, and verifies deliverables. Therefore, the following processes form part of the quality control actions for the project:

1. **Use control measures to analyze quality standards and processes** – will be used to measure the project performance against the benchmarked training guidelines and grading scales.

2. **Planned versus actual performance** - this tracks the conformance of the deliverables and helps the project team identify schedule and cost-related quality improvements.

3. **Identification of risks and the implementation of mitigation measures** – using a cause and effect tool/diagram to evaluate the areas of risks and determine the most appropriate corrective actions, which is a continuous action throughout the project's lifecycle.

4. **Quality Metric and measurements** – determining the standard deviation related to each deliverable will help the project team analyze the impact on the project. It helps the project team determine the failure rate, on-time performance, and on-budget performance related to each deliverable.

Figure 23.*Conformity Quality Assessment Process*

Source. Author's own elaboration (2021)

4.6 Resource Management Plan

Improve the Capacity of the National Training Agency (NTA) and the Antigua and Barbuda Institute of Continuing Education (ABICE) to Issue National and Caribbean Vocational Qualifications Project

Identification Number: GTA/AB/345/21-22

Prepared By: Barbara Williams, Project Manager

Document Version:

Approved by Project Sponsor: _____

Approved by Beneficiary: _____

Approved by PSC Chair: _____

Date:

Abstract: The Resource Management Plan lists all the resources required to complete the project successfully. The broad resources category for the project covers time, people, supplies, equipment, etc. The development of the Resources Management Plan is linked to the project budget and schedule, which allows the project team to identify resource gaps. Additionally, the appropriate allocation of resources to the project team is also achieved through the Plan.

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The Resource Management Plan lists all the resources required to complete the project successfully. The comprehensive resources category for the project covers time, people, supplies, equipment, etc. The development of the Resources Management Plan is linked to the project budget and schedule, which allows the project team to identify resource gaps. Additionally, the appropriate allocation of resources to the project team is also achieved through the Plan. In the development of the resource Management Plan, the project team devised the following key guiding question:

- What are the roles and responsibilities of the project team?
- What are the budget allocations?
- What is the performance measure?
- What is the schedule baseline for each project phase?

Therefore, the allocation of resources for the project is managed through clearly defined roles and responsibilities for each project team member. Additionally, the project manager would be required to provide comprehensive status updates on the use and availability of the project resources taking into account associated risks and potential impact on schedule and budget. Consequently, the Integrated Resource Management Plan is intended to track resources cost and use, balance the project team's workload, and evaluate actual versus planned cost.

4.6.1 Resources Allocated

To effectively execute and manage the project, the following are the project resources allocations:

Chart 27.

Resource Allocations

Resource Description	Location	Allocation
Project Management Team		
Project Manager	Internal	100% of time & effort
Financial Manager	Internal	100% of time & effort
Procurement Specialist	Internal	100% of time & effort
TVET Training Expert Assessor	Internal	100% of time & effort
Education Specialist and Quality Assurance	Internal	100% of time & effort
Communication Specialist	Internal	100% of time & effort
TVET Curriculum Developer	Internal	100% of time & effort
Project Secretary	Internal	75% of time & effort
Sponsor Representative	Internal	40% of time & effort
Project Steering Committee Members (6 persons)	Internal	75% of time and effort
Technical Experts		
TVET Training Expert - Conduct training	External	14 months
Legal drafter – review and draft amendments to TVET related legislation	External	8 months
Education Policy Specialist – develop TVET policy	External	8 months
IT Expert – hardware and software implementation	External	8 months

Chart 27.		
<i>Resource Allocations (continues)</i>		
Training and Certification		
Training Materials	External	14 months
CVQ Training and certification exercises	External	14 months
Training room	External	14 months
Training Equipment	External	14 months
Marketing and PR		
Marketing and media	Internal/ External	16 months
Website development	External	16 months
Conferences and workshops (facility, teaching aids, and equipment)	External	16 months
Publication of information materials (design, printing, distribution)	Internal/ External	11 months
Radio and television advertisements	External	16 months
Social media posting (Instagram, Facebook, WhatsApp)	Internal/External	16 months
Equipment		
Computer hardware	External	16 months
Training software	External	16 months
Telecommunications		
Online communication software	Internal	Full time
Telephone	Internal	Full time
Fax machine	Internal	Full time
Email, dropbox, google docs – report development and transmission	Internal	Full time
Office Space		
Project team office space	Internal	Full time

Source. Author's own elaboration (2021)

4.6.2 Resources Requirements

The resource requirements identify the types and quantities of resources required for each activity. Chart 28 provides an overview of tasks, skill level required, and risk level associated with each project resource.

Chart 28.

Project Resource Requirements

Resource Description	Skills Level	Associated Task(s)	Duration and time required	Level of Risk (H,M,L)
Project Management Team				
Project Manager	3	Manage the overall implementation of the project.	100% of time & effort	High
Procurement Specialist	3	Responsible for procurement, logistic etc.	100% of time & effort	High
Financial Manager		Responsible for all project-related payments, budget, and cost estimates.	100% of time & effort	High
TVET Training Expert Assessor	5	Responsible for the training component of the project and monitoring the consultancy.	100% of time & effort	High
Education Specialist and Quality Assurance	4	Responsible for the management of the quality component of the project and training.	100% of time & effort	High
Communication Specialist	3	Responsible for the communication aspects of the project.	100% of time & effort	High
TVET Curriculum Developer	4	Responsible for the programme and institute audit.	100% of time & effort	High

Chart 27.				
<i>Project Resource Requirements (continues)</i>				
Project Secretary	1	Administrative support to the project team.	75% of time & effort	Medium
Sponsor Representative	3	Review, approve, and accept project deliverables.	40% of time & effort	High
Project Steering Committee Members (6)	3	Monitor the implementation of the project	75% of time and effort	High
Technical Experts				
TVET Training Expert	4	Responsible for the development of the projects' training component including the training materials.	14 months	High
Legal drafter	4	review and draft amendments to TVET related legislation	8 months	High
Education Policy	5	Responsible for the development of the TVET policy.	8 months	High
IT Expert	3	Set up and install hardware and software for training	8 months	High
Training and Certification				
Training Materials	Print to specification	Training materials will be put together by the TVET training expert as part of the consultancy	14 months	High
CVQ Training and certification exercises	Print to specification	CVQ certificates awarded based on competence level passed	14 months	High
Training room	Functional	Execution of project activities	14 months	Medium

Chart 27.				
<i>Project Resource Requirements (continues)</i>				
Training Equipment	Functional	Execution of project activities	14 months	High
Marketing and PR				
Marketing and media	3	Sharing information to project stakeholders and the wider public.	16 months	High
Website development	4	Sharing information and status reports to stakeholders and the wider public.	16 months	High
Conferences and workshops (facility, teaching aids et and equipment)	Functional	Sharing information on the project scope, and implementation to targeted stakeholders.	16 months	High
Chart 28: Resource Requirements (Own Elaboration, 2021)				
Publication of information materials (design, printing, distribution)	3	Sharing information on the project scope, and implementation to targeted stakeholders.	11 months	High
Radio and television advertisements	4	Sharing information on the project scope, and implementation to targeted stakeholders.	16 months	High
Social media posting (Instagram, Facebook, WhatsApp)	3	Sharing information on the project scope, and implementation to targeted stakeholders.	16 months	High
Equipment				
Computer hardware	Fit specification	Execution of project activities	16 months	High
Training software	Fit specification	Execution of project activities	16 months	High

Chart 27.				
<i>Project Resource Requirements (continues)</i>				
Telecommunications				
Online communication software	Functional	Execution of project activities	Full time	Medium
Telephone	Functional	Execution of project activities	Full time	Medium
Fax machine	Functional	Execution of project activities	Full time	Medium
Email, drop box, google docs – report development and transmission	Functional	Execution of project activities	Full time	Medium
Office Space				
Project Team office space		Working space	Full time	Low
Key: Skills Level Scale				
5 – expert 4 – specialist 3 – professional 2 - skilled				

Source. Author's own elaboration (2021)

4.6.3 Basis of Estimates

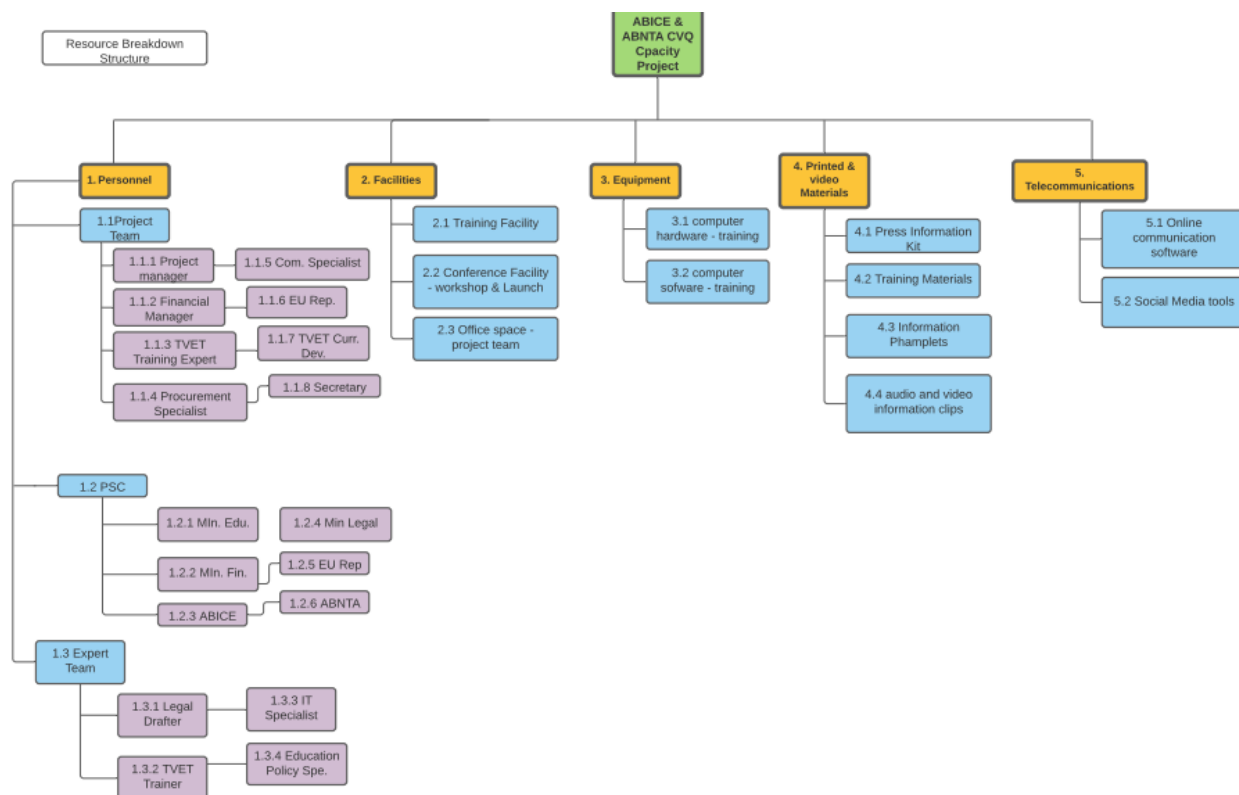
The basis of estimates is the methods used to develop the estimates and resources for the execution of the project. Based on the PMI standard, the supporting details needed to develop the estimates include, assumptions associated with the estimate, known constraints, range of estimates, the confidence, and documentation of identified risks.

Planning meetings convened by the project manager with both internal and external stakeholders provided input to estimate the resources needed, the skills level, quantity, and quality of materials.

4.6.4 Resource Breakdown Structure

The resource breakdown structure is a hierarchical representation of the resources required for the project.

Figure 24.

Project Breakdown Structure

Source. Author's own elaboration (2021)

4.6.5 Acquire Resources

The resources required for the project would be acquired based on the project schedule, resource requirements, and the stakeholder register. The project manager with inputs from the sponsor would assign the internal resources. The external resources would be acquired through the procurement process. A resources calendar would be used to determine the period that each resource would be required. The use of the calendar is linked to the project schedule.

4.6.6 Project Team Assignments

The RACI chart shows the relationship between project tasks and team members. Changes to project team responsibilities to be reviewed and approved by the PSC. The proposal and approval of changes will follow the change request and control process approved for the management of the project.

Chart 29.
RACI Chart

RACI Chart	Sponsor	PSC	Project manager	Fin. Man	TVET Trainer	Procurement Specialist	Edu. Specialist & Quality Assurance	Comm. Specialist	TVET Curri. Dev	Project Secretary
Project Planning	A	A	R	C	C	C	C	C	C	I
Project Management	A	A	R	C	C	C	C	C	C	I
Procurement	C	A	R	C	C	A	C	I	C	I
Project Launch	A	A	R	C	C	I	I	A	I	I
Training & Certification	I	I	R	C	C	I	A	I	R	I
Media & Marketing	I	I	A	C	C	I	C	R	C	I
Project Closure	A	R	R	R	R	R	R	R	R	I

Source. Author's own elaboration (2021)

RACI Definitional Key

- **Responsible (R):** The team member that is responsible for completing each task.
- **Accountable (A):** This person is accountable for the results of the tasks, as it relates to quality, cost, and schedule.
- **Consulted (C):** Review and consult on each deliverable by more than one team member. Consulted parties are typically the people who provide input based on either knowledge or experience pertaining to specific deliverables.
- **Informed (I):** These team members simply need to be kept in the loop on project progress, rather than being involved in the details of every deliverable.

4.6.7 Team Development and Performance Measure

Improving the competencies and interaction of the project team members enhances the team's working environment and project performance. The project team will engage in development activities designed to motivate, build, and help the team to achieve the project objective and performance. Therefore, the project manager is responsible for establishing and monitoring an effective communication system between all project team members. The project manager is also

responsible for encouraging collaborative decision-making, problem solving, conflict resolution, and building trust among the project team.

The project beneficiary is responsible for providing a suitable and comfortable working environment for the project team.

As part of team development activities, the project team will participate in a getting-to-know-you session designed to build relationships among the project team that will assist with creating a professional working environment. It will also help each team member to understand each other's personalities.

Further, at the commencement of the project, the project team will meet with the PSC, including the sponsor to review the terms of reference for each team member and establish clear roles and responsibilities. The PSC will use performance reports to manage the project team results. Additionally, the information from the work performance reports will assist both the project manager and the PSC to determine future resource requirements.

Since this project is being implemented through a grant, there is no performance rewarded budgeted for high performance by the project team. Personal professional references on the future project would greatly benefit the project team.

4.6.8 Control Resources

The control resources process relates managing of resources assigned to the project, both physical and human resources. Performed throughout the project's lifecycle, this ensures that the planned resources are available as required to avoid delays in delivery, which can affect the project schedule and budget.

For this project performance, reviews would be used to measure and compare planned resources utilization against actual. The results of this process will highlight any issues that can affect the use of project resources.

There the control resources process follows the standard principles established by PMI (2017, p. 354):

- Monitoring resource expenditure – this is the responsibility of the financial manager
- Identifying and dealing with resource shortages/surplus
- Ensuring that resources are used and released according to the project schedule – this is the responsibility of the project manager, financial manager, and procurement specialist
- Informing stakeholders of any issues with the use and access to any resources –is the responsibility of the project manager
- Managing changes as they occur.

Additionally, the financial manager using the project budget will monitor resource expenditures. Within this process, a cost-benefit analysis would be used

to determine the best corrective actions if any project cost deviations are necessary. All change requests, including requests for additional resources, will follow the project's Change Control process. The relevant project documents (including the Assumption Log, Issue Log, Lessons Learnt Register, Resource Assignments, Resource Breakdown Structure, or Risk Register) will be updated based on the approved changes.

Chart 30.

Resource Monitoring Matrix

Project Name:							
Project ID#:							
Version Control Date & No.:							
Resource Description	Resource Allocation	Resource Required	Resource Used	Resource Gap	Risk	Action -Gap	Timeframe

Source. Author's own elaboration (2021)

4.7 Communication Management Plan

Improve the Capacity of the National Training Agency (NTA) and the Antigua and Barbuda Institute of Continuing Education (ABICE) to Issue National and Caribbean Vocational Qualifications Project

Identification Number: GTA/AB/345/21-22

Prepared By: Barbara Williams, Project Manager

Document Version:

Approved by Project Sponsor: _____

Approved by Beneficiary: _____

Approved by PSC Chair: _____

Date:

Abstract: The purpose of the Communications Management Plan is to ensure that the project provides credible, relevant, and consistent information to all project stakeholders. The Plan outlines the communication guidelines for the project and identifies the communication tools, messages. The Plan was developed based on a template obtained from <https://www.pmalliance.eu/publications>

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4.7.7 Monitor Communications

The Communication Management Plan highlights and details the communication needs and expectations of the project. Accordingly, communication is the project's "lifeblood", since its success is dependent on the efficiency of the communication strategy and framework established for the project. Thus, the Communication Plan depends on the project team's understanding of the communication process. The development of the Communication Management Plan is built on implementing sound mechanisms, using practical tools and techniques such as a SWOT Analysis and interviews to identify the stakeholder requirements.

Therefore, the Project Charter, Stakeholder Analysis, and Register were used to create the Communications Management Plan. The plan includes the communications management approach, objectives, methods of communication, and the monitoring process for the plan.

4.7.1 Communication Management Approach

The development of the Communications Management Plan incorporated the following parameters:

- Identify stakeholder requirements to communicate appropriate information and messaging;
- List communication goals and objectives;
- The plan details the five W's and H of communication, as depicted in Figure 24 below:

Figure 25.*The W's and H of Communication*

Source. Author's own elaboration (2021)

- Identify appropriate methods/modes of communication, including emails, memos, reports, press conferences, etc.;
- How to update the Communication Plan based on the project performance;

- Identify the obstacles to communication, which should be linked to the risks;
and
- Identification of the internal communication tool among the project team including the frequency and level of details to be communicated.

Additionally, the communications expert on the project team, and the project manager, will take the lead role for the implementation and monitoring of the plan. The communications expert will develop an electronic directory of the contact information for the project team and the stakeholders. Meetings (both in-person and virtual), email, conference calls would be used as the primary tool for communicating among the project team.

The plan's implementation includes an analysis of the impact of the communication tools, which the assigned project team member will keep under review and update through the appropriate procedures approved for the recommendation, review, acceptance, and documentation of changes to the plan. This is an impact component of the plan since changes to the communication strategy can affect the stakeholder engagement methods, risks, cost, and assigned resources. The communications expert must to review and evaluate all changes to the plan and report to the project manager. Additionally, the PSC, in consultation with the sponsor, is required to approve those actions and changes.

4.7.2 Communications Objectives

The key communications objectives for the project are:

- To provide opportunities to receive feedback from stakeholders.
- To distribute accurate and timely information about the project.
- To develop clear and concise written, audio, and verbal communication about the project.
- To use the most efficient communication tools and techniques. and
- To increase the knowledge and understanding about the benefits and importance of the project.

4.7.3 Communications Management Assumptions

- ABICE, ABNTA, and the Ministry of Education will provide the necessary support to the development and execution of the Communications Plan.
- Consistent and informative messages to all project stakeholders.
- The most efficient communication tools used for the implementation of the plan.
- All the resources necessary for the implementation of the plan will be available and disbursed promptly.

4.7.4 Stakeholder Communications Requirements

Based on the list of stakeholders identified in the Stakeholder Register, the communication requirements include:

Chart 31.*Stakeholder Communication Requirements*

No	Stakeholder	Role	Contact Information	Communication Type
1	ABICE	Educator & Trainer	Director abice@ab.gov.ag	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
2	ABNTA	Educator & Trainer	Executive Director abnta@ab.gov.ag	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
3	Ministry of Education	Policy	Director of Education clarebrowne@ab.gov.ag	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings, newsletters/publications
4	Ministry of Finance	Finance Management	Financial Secretary HarrisW@ab.gov.ag	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
5	Contractors	Service	President	Status Reports,

Chart 31.				
<i>Stakeholder Communication Requirements</i>				
No	Stakeholder	Role	Contact Information	Communication Type
.	Association	provider	<u>JenkinC@gmail.com</u>	Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings, newsletters/publications
6	Plumbers Association	Service provider	President <u>HillBaldwin@gmail.com</u>	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings, newsletters/publications
7	Hotels & Tourist Association	Service provider	Executive Director <u>ABHTA@candw.ag</u>	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings, newsletters/publications
8	Auto-body & Mechanic Association	Service provider	President <u>DeFreitasV@gmail.com</u>	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings,

Chart 31.				
<i>Stakeholder Communication Requirements</i>				
No	Stakeholder	Role	Contact Information	Communication Type
				newsletters/publications Focus Groups Meetings,
9	Secondary School Students	Trainees	Provided through project contacts	Status Reports, Emails, Face-to-Face Meetings, Media presentations, newsletters/publications
10	Trinidad & Tobago Technical Training Agency	Consultants & Trainer	Executive Director T&TTEVET@tt.gov.edu	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
11	Local Media Partners	Information dissemination	ABS Observer News ZDK Radio	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings, media information kit
12	Barbara Williams	Project Manager	BarbaraN.Williams@ab.gov.ag	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus

Chart 31.
Stakeholder Communication Requirements

No	Stakeholder	Role	Contact Information	Communication Type
				Groups Meetings
13	Jenette Mason	Education Officer	MasonJ@ab.gov.ag	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
14	Cassey Roberts	Education Quality Assurance Officer	Cassey.Roberts@ab.gov.ag	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
15	Ministry of Information and Technology	Information communication technology expert	Director of IT Services Diggs.James@ab.gov.ag	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
16	European Union	Funder	Head of Delegation LuisM@eu.europa.com	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings

Source. Author's own elaboration (2021)

4.7.5 Project Communication Framework

The development of the Communication Management Plan emerges from the developing a communication strategy based on the needs of both the project and its stakeholders. This is a necessary process since it ensures that its stakeholders know the most appropriate messages about the project. Therefore, the project manager and the project team will work to tailor how the Project Communication Management process is applied. In this respect, the project team should take account of the following components, when tailoring the communication project actions:

- Stakeholders – (internal or external)
- The physical location of the team members
- Communication technology – the use of the most appropriate and effective technology for communicating with all stakeholders
- Language – the use of simple clear unambiguous language
- Knowledge management – the knowledge management repository of the organization

Therefore, the successful completion of the project requires excellent communication among all team members and stakeholders. Accordingly, the methods used to communicate information among project stakeholders takes account of the following factors based on the PMI standards (2017, p. 370):

- The urgency of the need for information

- Availability and reliability of technology
- Ease of use
- Project environment
- Sensitivity and confidentiality of the information

Consequently, the project utilizes an interactive communication model that incorporates of the sender, receiver, and feedback/response. Thus, the most appropriate communication approach for this project is a two-way vertical and lateral communication mode. This approach recognizes the importance of receiving, acknowledging, and receiving feedback from the information shared among the project team and with stakeholders.

The following are the appropriate technologies for the various methods of communication:

- ✚ **Interactive communication:** Real-time communication involving two or more stakeholders. The communication methods open to the project team include face-to-face meetings, video conferencing (i.e. Zoom, google meet, Go to Meeting, Microsoft teams), audio conferencing, WhatsApp Messing, Face Time, Social media, and phone calls. This form of communication will be used when an immediate response or feedback is required, and when the information being communicated is sensitive with the possibility of being misinterpreted.

✚ **Push communication:** This method of communication is used to distribute and communicate directly with stakeholders. The communication methods include emails, blogs, press releases, faxes, memos, and reports.

✚ **Pull communication:** This method of communication allows stakeholders to access information at their convenience and used to communicate to large groups. This method allows the project team to share information using cloud storage sites such as Dropbox, Google Drive, and OneDrive.

To resolve project communication issues, the project team must consider the impact of the issues on the scope, cost, and schedule. In this regard, such issues must be resolved by the PSC and indicate the corrective actions the project team should take. Chart 32 describes the project's communication escalation process.

Chart 32.*Project Communication Escalation Matrix*

Priority level	Description	Decision Authority	Resolution timeframe
Level 1	Major impact on the project schedule, cost, and scope	PSC	Within 3 working days
Level 2	Moderate impact on the project schedule, cost, and scope	PSC	Within 5 working days
Level 3	Minor impact on the project schedule, cost, and scope	Project Manager	Within 7 working days

Source. Author's own elaboration (2021)

Chart 33.*Project Communication Methods (continues)*

Communication Description	Frequency	Method of Communication	Audience	Owner
Discuss the project Overview, Goals, Objectives, and Deliverables	Once	Face-to-Face meetings, online calls, Emails, Shared Docs	Project Sponsor, Stakeholders, Project Manager, Team Members, ABICE, ABNTA, Ministry of Education	Project Manager Project Team Project Sponsor
Marketing, Communications and PR Strategy	Weekly	Face-to-Face meetings, online calls, Emails, Shared Docs	Stakeholders, Project Manager, Team Members, ABICE, ABNTA, Ministry of Education	Communication Specialist
Project Launch and Kick-off	Once	Press Conference	Project Sponsor, Stakeholders, Project Manager, Team Members, ABICE, ABNTA, Ministry of Education	Project Manager Communication Specialist
Project Status Meeting	Monthly	Publication of Project Status	Project Sponsor,	Project Manager and

Chart 33.*Project Communication Methods (continues)*

Communication Description	Frequency	Method of Communication	Audience	Owner
		reports, email	Stakeholders, Project Manager, Team Members, ABICE, ABNTA, Ministry of Education	Communication specialist
Project Steering Committee Meeting	Monthly	Online/virtual/ face-to-face	Project Sponsor, Stakeholders, Project Manager, Team Members, ABICE, ABNTA, Ministry of Education	Project manager Communication specialist
Result of training needs assessment	Once	Press Conference, Workshop	Project Sponsor, Stakeholders, Project Manager, Team Members, ABICE, ABNTA, Ministry of Education, Consultant	Project Manager Ministry of Education
Training	Monthly	Workshop	Stakeholders, Project Manager,	Project Manager

Chart 33.*Project Communication Methods (continues)*

Communication Description	Frequency	Method of Communication	Audience	Owner
			Team Members, ABICE, ABNTA, Ministry of Education, Consultant	Expert Consultant
Project Status Update	Monthly	Face-to-Face meetings, online calls, Emails, Shared Docs	Project Sponsor, Stakeholders, Project Manager, Team Members, ABICE, ABNTA, Ministry of Education	Project Manager Individual Project Specialist
TVET Policy unveiling	Once	Press Conference, Workshop	Project Sponsor, Stakeholders, Project Manager, Team Members, ABICE, ABNTA, Ministry of Education	Project Manager Communication Specialist
Award of certification	Quarterly	Face-to-Face meetings, online calls, Emails, Shared Docs	Project Sponsor, Stakeholders, Project	Project Manager Project Specialist

Chart 33.*Project Communication Methods (continues)*

Communication Description	Frequency	Method of Communication	Audience	Owner
			Manager, Team Members, ABICE, ABNTA, Ministry of Education	
Consultation on the legislative framework	Weekly	Face-to-Face meetings, online calls, Emails, Shared Docs	Project Sponsor, Stakeholders, Project Manager, Team Members, ABICE, ABNTA, Ministry of Education, Ministry of Legal Affairs, Consultant	Legal Specialist
Project Performance	Monthly	Face-to-Face meetings, online calls, Emails, Shared Docs	Project Sponsor, Stakeholders, Project Manager, Team Members, ABICE, ABNTA, Ministry of Education	Project Manager
Media Interactions	Weekly	Face-to-Face meetings, online calls, Emails,	Project Sponsor, Stakeholders,	Communication Specialist

Chart 33.*Project Communication Methods (continues)*

Communication Description	Frequency	Method of Communication	Audience	Owner
		Shared Docs	Project Manager, Team Members, ABICE, ABNTA, Ministry of Education, Expert Consultants	
Consultants Progress Report	Monthly	Email	Project Sponsor, Stakeholders, Project Manager, Team Members, ABICE, ABNTA, Ministry of Education	Project manager
Change Control Meeting	As required	Email	Project Sponsor, Stakeholders, Project Manager, Team Members, ABICE, ABNTA, Ministry of Education	Project Manager Change Control Committee
Project End Review Meeting	Once	Email	Project Sponsor, Stakeholders,	Project manager

Chart 33.
Project Communication Methods (continues)

Communication Description	Frequency	Method of Communication	Audience	Owner
			Project Manager, Team Members, ABICE, ABNTA, Ministry of Education	Project Sponsor

Source. Author's own elaboration (2021)

4.7.6 Monitor Communications

The monitor communication process and actions ensure the efficient and effective monitoring of the project's information flow among the project stakeholders. This process allows for changes to the methods and techniques to accommodate the status of the project and the changing needs and requirements of stakeholders. This process includes the implementation of the following actions:

- i. **Stakeholder engagement Audits** – this would be undertaken at a predetermined time by the project team to assess the impact and the results of the communication activities and actions. A stakeholder satisfaction survey will form part of the audit exercise. The audit would measure the frequency, mode, satisfaction, audience, and change brought by the

communication actions and activities. This process would assist the communications expert and the project team in addressing any information gaps, misinformation, and its value to stakeholders.

- ii. **Work Performance Information** – the project team uses the results and data from the work performance information to make decisions on the impact of the plan on the project deliverables. In this regard, progress reports, and feedback from the stakeholder satisfaction survey helps the project team determine the right message and communication channels.
- iii. **Meetings** – The Communication specialist, with the support of the project manager, will assess and control the flow of information about the project with all stakeholders. Meetings will be used for the sharing of information among the project team and with stakeholders. A set of guidelines should guide the conduct of the meetings including:
 - ✚ An agenda and objectives should be established for each meeting
 - ✚ The agenda should be distributed at least three (3) working days before the scheduled meeting.
 - ✚ Working documents should be developed and distributed at least three (3) working days before the scheduled meeting date.
 - ✚ The communications specialist should chair the meeting.
 - ✚ Designate a project team member to record and circulate the minutes of the meeting.
 - ✚ Recurring meetings should be scheduled in advance

- iv. **Change Control** - during the implementation of the project, there may be a need to make changes to the Communication Management Plan. Proposed changes to the plan should be written and include an impact analysis on the project's budget, schedule, quality, and scope. The risk associated with the changes to the plan should be identified and assessed.

Additionally, before the Change Control Committee reviews changes, consultations must be undertaken with the PSC, and stakeholders to obtain their feedback. Once the changes are approved they would be logged, the appropriate components of the Project Management Plan including the stakeholder's register, and engagement plan would be updated.

4.8 Risk Management Plan

Improve the Capacity of the National Training Agency (NTA) and the Antigua and Barbuda Institute of Continuing Education (ABICE) to Issue National and Caribbean Vocational Qualifications Project

Identification Number: GTA/AB/345/21-22

Prepared By: Barbara Williams, Project Manager

Document Version:

Approved by Project Sponsor: _____
Approved by Beneficiary: _____
Approved by PSC Chair: _____
Date: _____

Abstract: The purpose of the document is to outline the risk management approach for the project. The Plan specifies the methodology, standards, tools, and techniques used to develop and support risk management. The Plan also defines the risk monitoring and escalation process taking into account the risk response actions. The Plan was developed based on a template obtained from <https://www.pm2alliance.eu/publications>.

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4.8.7 Risk Control

The Risk Management Plan defines the management approach to identify, analyze, respond, monitor, and control the risks associated with the project. Risk management is an ongoing process that continues through the life of a project, as new risks can be identified at any time. Therefore, the Risk Management Plan, documents, defines, identify and assesses the project risks. The Plan also defines the risk monitoring and escalation process, including the tools and techniques to communicate the risks and the response actions and strategy.

In developing the Risk Management Plan the Project Charter was used, which establishes the baseline for identifying of the potential project risks. The Risk Breakdown Structure (RBS) provides a categorization of the risks, which aids the project team to develop the structure of the risk monitoring and response measures.

4.8.1 Risk management Objectives

The main objectives of the Risk Management Plan are:

- To identify and assess project risks.
- To report all risks to the Project Steering Committee.
- To ensure that risk response strategies are in-line with approved risk level thresholds.
- To effectively implement the appropriate risk response measure.
- To ensure that all risks are monitored and controlled.

4.8.2 Risk Management Process

The risk management approach established for this project is a systemic process that identifies, assesses, prioritizes, manages, and controls risks that can affect the execution and achievement of the project deliverables.

Risk Identification – involves identifying and documenting of risks that can affect the project deliverables; this is a continuous process, undertaken during the project's lifecycle. The Project Charter is the primary input for this process; the initially identified risks were included in the Risk Breakdown Structure (RBS). The Risk Register would capture the risks initially identified in the Project Charter and provide a comprehensive analysis of each risk based on their categorization from the RBS. Chart 34 is the risk identification and definition log, which accounts for and analyzes new project risk.

Chart 34.*Risk Identification and Description Log*

Risk Identification and Description	
ID	The risk identifier.
Category	Risk category related to the area affected by the risk
Title	A short title for the risk.
Description	A description of the risk, its causes, the kinds of problems that it could result in (potential effects), and risk dependencies.
Status	<p>The risk status can be any of the following:</p> <p>Proposed: this is the initial status. Use this while the risk is still being specified.</p> <p>Assessing: use this status to initiate an assessment.</p> <p>Waiting for Approval: use this to request approval. Before doing this, make sure that the assessment is complete and that the estimates are reliable.</p> <p>Approved: this status is set once the risk possibility has been accepted.</p> <p>Rejected: This status is set if the risk was rejected as not relevant.</p> <p>Closed: this status is set once the risk has been managed (e.g. mitigation actions have been implemented) and it is not a risk for the project anymore.</p>
Identified by	The person who identified the risk.
Identification data	The date on which the risk was identified.

Chart 35.*Risk Assessment Log*

Risk Assessment	
Likelihood (L)	A numerical value denotes the estimate of the probability that the risk will occur.
Impact (I)	A numerical value denotes the severity of the risk's impact should it occur.
Risk Level (L*I)	The risk level is the product of the likelihood and impact (RL=L*I).
Risk owner	The person is accountable for managing and monitoring the risk.
Escalation	Whether or not the risk is to be escalated (Yes or No).
Risk Response	
Risk response Strategy	<p>The possible strategies to deal with the identified (negative) risks are:</p> <ul style="list-style-type: none"> - Avoid: risk avoidance, modifying the project or project plan to eliminate the conditions or activities that introduce the risk. - Reduce risk mitigation or reduction through the proactive implementation of risk reduction activities. - Accept acceptance of the risk. In this case, contingency plans should be defined in case the risk occurs (active acceptance). - Transfer/Share: transfer or share the risk with other entities, e.g. through insurance, subcontracting, etc.

Source. Author's own elaboration (2021)

The project team will also incorporate various tools and techniques, including brainstorming, desk reviews, assumption analysis, and questionnaires to identify potential project risks.

Risk Assessment – In this process, the project team would assess the probability and impact of the identified risk on the project objectives and deliverables. The results of the assessment, including the risk level, determine the appropriate risk response measure and strategy.

Risk Response Development – During this stage, the most appropriate risk response strategy is chosen. Linked to the identification of the risk response measure are its assessment, the probability of its occurrence, and impact. The project team must determine the most appropriate response for each risk. The strategy for addressing the project risk includes the following:

- Avoid – implementing actions to reduce the impact on the project.
- Exploit - implementing actions to maximize the positive impact.
- Transfer/Share – allow a third party to manage the risk.
- Mitigate/Enhance – changing some aspects of the project.
- Accept – continue with the project as defined, where there is no response measure.

After the strategy for each risk has been selected, the specific actions to implement the strategy will be defined, scheduled, and assigned.

Risk Control – this step aims to monitor and control the identification of the risk response measures. This process also includes the continuous monitoring of the project to identify new risks. The main inputs used by the project team include the Risk Assessment Log, Risk Identification Matrix, and register to the PSC of the significant project risks. The report would take account of the impact on the stakeholder engagement and communication strategy that would be appropriate to address the risks. The project manager would also ensure the implementation of the appropriate contingency plans. The assigned risk owner would also provide periodical status risk reports and response strategies to the project manager.

Additionally, included, as part of the risk management process and strategy is the further categorization of risks as:

- i. Known risks – are risks that have been recognized or identified by the project team in the planning process; and
- ii. Unknown risks – are risks not known during the planning stages, these risks are discovered throughout the project life cycle.

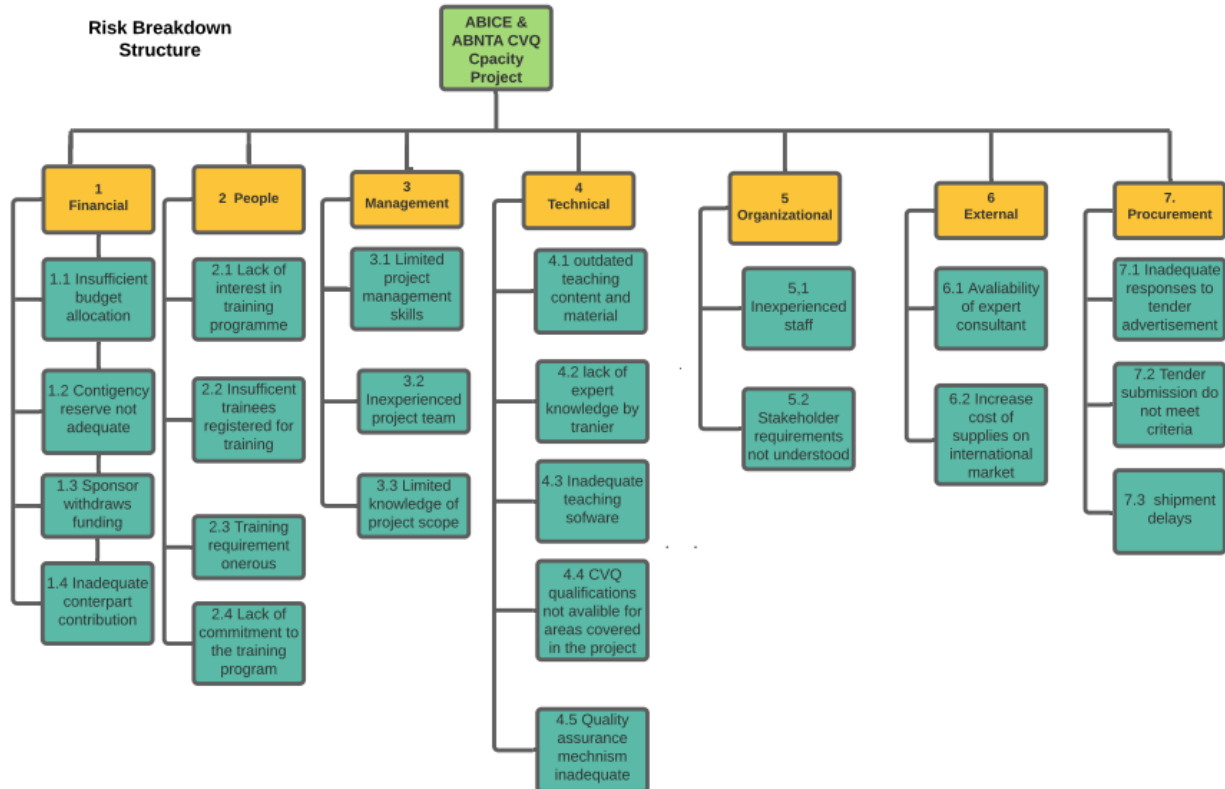
4.8.3 Risk Management Roles and Responsibilities

The responsibility for managing risks would include the project team and other stakeholders. The project manager is responsible for the change control

process, preparation of the Risk Register, conducting regular risk identification, and assessments, reporting to the project sponsor on any risks that significantly impact on cost, schedule, and quality of the project. Additionally, other members of the project team and other stakeholders would have other responsibilities to manage of the known and unknown project risks.

4.8.4 Risk Breakdown Structure

The risk breakdown structure is a hierarchical representation of the potential risks, this helps identify the risks associated with the project.

Figure 26.*Project Risk Breakdown Structure*

Source. Author's own elaboration (2021)

4.8.5 Risk Probability and Impact Matrices

Identified risks are evaluated using a qualitative rating of the probability of occurrence and the impact scales. The risks are analyzed by combining the probability and impact to produce the risk level. This allows the project manager and team to represent all project risks graphically to determine the level of seriousness, and how the risk should be treated including the response measure/action.

Probability Scale

Chart 36.

Probability Scale Matrix

Rating	Description
1	The incident is not expected to happen or may only occur in exceptional situations
2	The incident happens infrequently in past projects and expected to occur within 8 – 12 weeks of the project.
3	The incident expected to occur within 6 – 8 weeks of the project.
4	The incident has occurred in past projects and expected to happen within 4 – 6 weeks.
5	The incident expected to happen within 4 weeks, and conditions exist for it to occur.

Source. Author's own elaboration (2021)

Risk Probability and Impact Matrices

The risk impact matrix defined in Chart 37. The chart illustrates the negative risk impacts on schedule, cost, and quality.

Chart 37.*Risk Probability and Impact Matrix*

Scale	Probability	+/-Impact on Project Objective		
		Schedule	Cost	Quality
5 - Very High	< 70%	Delay in delivery <10 – 12 weeks	< 300,000	Very significant impact on training
4 - High	51 - 70%	Delay in delivery 8 – 10 weeks	250 000 – 300,000	Significant impact on impact on training
3 - Medium	31 -50%	Delay in delivery 6 – 8 weeks	180,000 – 250,000	Some impact on organizational training areas
2 - Low	11 – 30%	Delay in delivery 2 – 4 weeks	150,000 – 180,000	Minor impact on organizational training capacity
1 - Very Low	1 -10%	Delay in delivery 1 week	>100,000	Minor impact on training

Source. Author's own elaboration (2021)

Risk Score

The Probability and Impact Matrix is the matrix used to develop the risk score as outlined in Chart 38. The values range from one (1) (very low exposure) to twenty-five (25) (very high exposure). Risks with a value between one (1) and

six (6) are considered low risks, risks between 7 to 14 are medium risks, and values between 15-25 are considered very high risks.

Chart 38.

Probability x Impact (Pxl) Table

Pxl Table			
Score	Category	Action	Description
From 1-6	Green	Monitor	Minimum to action required to control risk.
From 7-14	Yellow	Manage & Monitor (mitigation action needed)	Management attention is required to control risk at an acceptable level.
From 15-25	Red	Mitigate (escalate actions to control risk)	Specific immediate action required by the PSC & sponsor to control risk.

Source. Author's own elaboration (2021)

Chart 39.

Probability x Impact (Pxl) Matrix

		Impact				
		1 – very low	2 – low	3 – medium	4 – high	5 – very high
Likelihood	5 – very high	5	10	15	20	25
	4 - high	4	8	12	16	20
	3 - medium	3	6	9	12	15
	2 - low	2	4	6	8	10
	1 – very low	1	2	3	4	5

Key:

	Risks should be monitored
	Risks cannot be accepted implement risk response strategy
	Immediate risk reduction and avoidance actions required

Source. Author's own elaboration (2021)

3.8.6 Risk Register

The Risk Register for this project accounts for all the identified risks. The register identifies consequences, probability, impact and trigger, and strategy for each category of risk. Each risk was given a probability and impact score, which determines the risk response strategy. The Risk Register was developed based on the RBS.

The Project Manager will maintain the risk register and will provide the status report of each assigned risk at the project team meeting

Chart 40.*Risk Register*

Risk Register								
RBS Code	Risk	Consequence	Probability	Impact	Pxl	Trigger	Owner	Strategy
1.1	Insufficient budget allocation	Unable to achieve project deliverables	5	5	20	The baselines used to develop the budget were outdated.	Project manager and Sponsor	Avoid – implement acceptable best practice procedures, techniques to develop the budget allocations for the project.
1.2	Contingency reserve not adequate	No budget for Unforeseen circumstances	5	5	20	The baselines used to develop the budget were outdated	Project Manager and owner	Avoid - implement acceptable best practice techniques to develop the budget allocations for the project.

Chart 40.								
<i>Risk Register (continues)</i>								
1.3	Sponsor withdraws funding	Project not completely implemented	5	5	20	The sponsor is not satisfied with the project performance	PSC, Sponsor, and Ministry of Education	Avoid – implement an appropriate mechanism to measure the project performance monthly, including the establishment of KPI.
1.4	Inadequate counterpart contribution for project deliverables	Specific project objectives not achieved	4	4	16	No allocation was made by the beneficiary to support implementation of the project	Ministry of Education	Avoid – ensure the approval and transfer of the counterpart resources to support the implementation of the project.

Chart 40.								
<i>Risk Register (continues)</i>								
2.1	Lack of interest in the training programme	Unable to train the acceptable amount of persons established by the project	5	5	20	The project training areas are not supported by stakeholders	PSC, Project Manager Communication Expert	Mitigate – ensure the communication strategy/plan includes the right messaging to generate high interest in the project.
2.2	Insufficient trainees register for training	Unable to train the acceptable amount of persons established by the project	5	5	20	Inability to meet to train the established personnel.	Project Manager Communications Expert	Avoid – ensure continuous message to all prospective stakeholders to generate interest in the project. The wide distribution of the application forms for project.

Chart 40.								
<i>Risk Register (continues)</i>								
2.3	Training requirement onerous	Trainees unable able to complete training	5	5	20	Training requirements not aligned to stakeholders needs	Project Manager and project team	Mitigate – engage in stakeholder consultations, industry research, and data to develop the training requirements.
2.4	Lack of commitment of participants to the training programme	Trainees unable to complete training	5	5	20	A high level of trainees drop out of the programme	Project Manager and project team	Mitigate – establish and create a flexible training environment and schedule.

Chart 40.								
<i>Risk Register</i>								
3.1	Limited project management skills	Unable to manage project objectives, execution, and achieve deliverables	2	4	8	High level of mistakes by the Project manager and team	Project Sponsor, Beneficiary	Avoid – the selection on the project team based on experience and strict qualifications requirements.
3.2	Inexperienced project team	Unable to manage project objectives, execution, and achieve deliverables	2	4	8	High level of mistakes by the Project manager and team	Project Sponsor, Beneficiary	Avoid - the selection on the project team based on experience and strict qualifications requirements.
3.3	Limited knowledge of project scope	Unable to manage project objectives, execution, and achieve deliverables	2	5	10	High level of misconcepti on the project scope.	Project Sponsor, Beneficiary	Avoid – conduct knowledge building, and awareness exercise about the project

Chart 40.								
<i>Risk Register (continues)</i>								
4.1	Outdated teaching content	Trainees do not qualify to receive CVQ certification	5	5	25	Training content not aligned to CVQ standards and requirements	PSC, Project Manager	Mitigate – engage the regional CVQ accreditation and training bodies to obtain the relevant CVQ standards and requirements that cover the project.
4.2	Lack of expert knowledge by trainer	The trainer did not achieve the training requirements for the project	5	5	25	Trainees unable to attain certification	PSC, Project Manager	Avoid – include professional and experience requirements in the terms of reference for all project experts and consultants.

Chart 40.								
<i>Risk Register (continues)</i>								
4.3	Inadequate teaching software	Procured software does not meet project specifications	3	4	12	Procured software cannot be used for the training programme	PSC, Project Manager	Avoid – develop a procurement checklist for the software specifications.
4.4	CVQ qualifications are not available for the areas covered by the project	Trainees do not qualify to receive CVQ certification	2	4	8	Trainees unable to attain certification	PSC, Project Manager	Mitigate - engage the regional CVQ accreditation and training bodies to obtain the relevant CVQ standards and requirements that cover the project.

Chart 40.								
<i>Risk Register (continues)</i>								
4.5	Quality assurance mechanism inadequate	Training materials, content not aligned to CVQ standards	5	5	20	Certification cannot be validated or verified by national and regional accreditation agencies	PSC, Project Manager	Avoid - engage the regional CVQ accreditation and training bodies to obtain the relevant CVQ standards and requirements that cover the project.
5.1	Inexperienced staff	Project management process not efficiently managed	1	3	3	High level of mistakes	PSC, Project Manager	Mitigate – implement staff training and capacity building activities

Chart 40.								
<i>Risk Register (continues)</i>								
5.2	Stakeholder requirements not understood	Limited engagement with stakeholder	2	4	6	High level of conflicts between the project manager and project team	PSC, Project Manager	Avoid – establish a structured mechanism to identify, and document stakeholder requirements.
6.1	Availability of experts consultants	The most qualified consultants not selected for the project	3	5	15	Selected consultants are not the most qualified	PSC, Project Manager, Procurement project Expert	Mitigate – establish strict recruitment and qualifications guidelines for consultants, and the evaluation of scope proposals from consultants

Chart 40.								
<i>Risk Register (continues)</i>								
6.2	Increase cost of supplies on the international market	The budget line for the procurement of goods and services increases or is <60% of the budgeted amount	3	5	15	<60% increase in the budgeted amount for goods and services	PSC, Project Manager, Procurement project Expert	Mitigate – establish procurement guidelines on how to manage cost increases
7.1	Inadequate response to the tender advertisement	Schedule delay	4	5	20	Late or no responses to tender advertisements	PSC, Project Manager, Procurement project Expert	Escalate - approval of project sponsor to change procurement approach

Chart 40.								
<i>Risk Register (continues)</i>								
7.2	Tender submissions do not meet criteria	Schedule delay	4	4	16	High level of tender submission thrown out by Tender Evaluation Committee	PSC, Project Manager Procurement project Expert,	Escalate – approval of project sponsor to change procurement approach
7.3	Shipment delays	Schedule delay	4	4	16	Schedule delay	PSC, Project Manager, Procurement project Expert	Escalate – seek an alternative supplier that can meet product specifications.

Source. Author's own elaboration (2021)

4.8.7 Risk Control

The project manager is responsible for ensuring that a risk assessment is undertaken before each project phase commences, including the appropriate approvals. At each project status meeting, a Risk Report should be submitted which should include a statement on the probability and impact of each risk. During this process, the risk control measures would include the following:

- Risk Audits - this is to measure the effectiveness of the risk management process.
- Variance analysis – to compare the plan and actual results, determining if the project is proceeding along the planned baseline.
- Reserve analysis - comparing the number of contingency reserves and the number of risks to determine if there are sufficient finances to cover the remaining r remaining risks.
- Risk Assessments - mainly to identify new risks, their root cause, and determine the potential probability of occurring and impact. It also determines the appropriate response.

Risk Contingency Planning – The Risk Management Plan will include contingency planning, which outlines a set of actions or guidelines to follow should an adverse risk occur. A Risk Contingency Plan allows the project team to

develop a set of actions or steps to guide the process of implementing the contingency risk strategies. Thus, the implemented strategies take account of the contingency reserve allocated in the project budget. Accordingly, the contingency risk actions include the following:

- Identify risk under each category.
- Assign the risk to an owner.
- Conduct a qualitative analysis to determine the likelihood and potential impact of the risk.
- Determine the impact of the risk as it relates to schedule, cost, and quality.
- Conduct a quantitative analysis to determine the severity level of the risks on project scope, cost, and schedule.
- Determine risk response strategy.
- Review and update the Risk Registry.
- Review and update the contingency plan.

4.9 Procurement Management Plan

Improve the Capacity of the National Training Agency (NTA) and the Antigua and Barbuda Institute of Continuing Education (ABICE) to Issue National and Caribbean Vocational Qualifications Project

Identification Number: GTA/AB/345/21-22

Prepared By: Barbara Williams, Project Manager

Document Version:

Approved by Project Sponsor: _____
Approved by Beneficiary: _____
Approved by PSC Chair: _____
Date: _____

Abstract: The purpose of the Procurement Management Plan outlines the procurement approach and addresses the type of contract to be used, procurement constraints, procurement risk, risk management, cost determination, decision criteria, vendor management, and performance matrix. The Plan further outlines the procurement requirements for the project and sets the guidelines for the management of the procurement process. The Plan was developed based on a template obtained from <https://www.projectpractical.com/procurement-management-plan-template-free-download/>

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 4.9.8.3 Contract Closure

The Procurement Management Plan aims to define the procurement requirements for the management of the project. The plan covers the procurement approach and addresses the type of contract to be used, procurement constraints, procurement risk, risk management, cost determination, decision criteria, vendor management, and performance matrix. The Plan further outlines the procurement requirements for the project and sets the guidelines for the management of the procurement process.

Accordingly, the plan establishes the guiding principles for managing procurements throughout the project's life cycle. The procurement process is a critical aspect of the project life cycle since it affects the project schedule, cost, and risks. Notably, the Procurement Plan accounts for the managing, monitoring the contract performance and contract closing.

4.9.1 Procurement Management Approach

The procurement specialist and the project manager will maintain strict oversight of the procurement activities for the project. The procurement specialist will work along with the Contracts and Management Unit of the EU Delegation to Barbados to the Eastern Caribbean located in Barbados. The Contracts and Management Unit will engage the project team in information and knowledge-building exercise on the EU's procurement process, documentation, contract types, and approval processes. The procurement specialist will review the procurement list with the EU (sponsor) for approval.

Therefore, the Procurement Management Plan for this project will follow a procurement process that includes the following:

- i. Initiating a request
- ii. Development of requirements (technical, quality, timing, and technology)
- iii. Request approval
- iv. Purchasing Authority
- v. Bid/Proposal Review
- vi. Contract Management responsibility
- vii. Sellers Performance
- viii. Contract Closure requirements

Therefore, the critical components of the Procurement Management Plan related to this project include:

- i. **Roles and Responsibilities** – this defines the boundaries, expectations, and authority of project team member including the project manager, technical evaluation team, and organization.

- ii. **Project Schedule** –identifies the schedule implications, risks, constraints, and assumptions structure of the plan.
- iii. **Vendor Control** – within this process, the project team would ensure that the work of the vendors, suppliers and is acceptable based on the technical and resource requirements of the project. Accordingly, these include project meetings, measuring product quality, and the delivery of training methods and content.
- iv. **Estimating** – as it relates to external procurement, an estimate based on the project budget is necessary to ensure its alignment with the project budget.
- v. **Prequalified Vendors** –the project team would develop a list of pre-qualified vendors, used for the single-source contract.
- vi. **Risk Management** –this includes the risk tolerance, types of contract, policies and procedures, risk probability and severity, review, and approval requirements. Issues relating to product quality, schedule, and changes in cost forms part of this process.
- vii. **Legal Jurisdiction** – the Procurement Management Plan would identify the legal framework and the legal requirements relevant to the developing of the procurement procedures and guidelines. Therefore, the laws of Antigua and Barbuda represent the legal framework of the project, while adhering to the procurement guidelines of the funder (EU).

- viii. **Payment** – approved project payments will be in Eastern Caribbean Dollars, linked to pre-defined deliverables and performance requirements. These requirements are outlined in the project SOWs.
- ix. **Constraints and Assumptions** – every project operates within an environment of constraints. The likely constraints relate to schedule, budget, stakeholders, technical standards, and specifications for the project.

4.9.2 Procurement Definition

See Chart 41 for the procurement reference guide to conduct and manage procurement:

Chart 41.*Procurement Definition*

Product Goods & Services	Cost	Owner	Responsibility	Procurement Method Selected	Selection Method	Evaluation Method	Contract Type	Procurement Period
TVET Consultant – Policy Development		Procurement expert, Project Manager & EU	Preparing bid documents, identifying seller, selection criteria, purchase approval, procurement risks & Assignments, awarding contracts, quality objectives, monitoring performance.	Request for Proposal	Single Source	Least Cost	Fixed Price Contract	9/21/21 – 11/2/21

Chart 41.

Procurement Definition (continues)

<p>TVET Training Consultant Agency</p>		<p>Procurement expert, Project Manager, EU & Ministry of Education</p>	<p>Preparing bid documents, identifying seller, selection criteria, purchase approval, procurement risks & Assignments, awarding contracts, quality objectives, monitoring performance.</p>	<p>Request for Proposal</p>	<p>Quality based/Technical proposal</p>	<p>Least Cost</p>	<p>Fixed Price Contract</p>	<p>9/21/21 – 11/2/21</p>
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Chart 41. <i>Procurement Definition (continues)</i>								
Communica tion & PR Agency		Procurement expert, Project Manager	Preparing bid documents, identifying seller, selection criteria, purchase approval, procurement risks & Assignments, awarding contracts, monitoring performance.	Request for Proposal	Quality based/tech nical proposal	Least Cost	Fixed Price Contract	9/21/21 – 11/2/21
IT Expert – website developmen t ABICE & ABNTA		Procurement expert, Project Manager, EU & Ministry of Information & Technology	Preparing bid documents, selection criteria, purchase approval, procurement risks & Assignments, awarding contracts, monitoring	Request for Proposal	Quality based/tech nical proposal	Least Cost	Fixed Price	9/21/21 – 11/2/21

Chart 41.								
<i>Procurement Definition (continues)</i>								
Computer Hardware and software – infrastructure development of ABICE and ABNTA		Procurement expert, Project Manager, EU & Ministry of Information & Technology	Preparing bid documents, identifying seller, selection criteria, purchase approval, procurement risks & Assignments, awarding contracts, monitoring performance.	Request for Quotation	Quality based/technical proposal	Least Cost	Fixed Budget	9/21/21 – 11/2/21
Legal & Education Consultant – Legal drafting		Procurement expert, Project Manager, EU & Ministry of Legal Affairs	Preparing bid documents, identifying seller, selection criteria, purchase approval, procurement risks & Assignments, awarding contracts, monitoring performance.	Request for Proposal	Single Source	Least Cost	Fixed Price	9/21/21 – 11/2/21

Source. Author's own elaboration (2021)

4.9.3 Contract Type

The project uses fixed-price contracts, where the supplier agrees to perform the work for one fixed price, regardless of the ultimate cost. The scope of works and duration of services required will be clearly defined, and the price of the contract will not change unless the scope of work changes. The procurement specialist reviews changes to the project's scope of work that will affect the service contracts and makes recommendations to the project manager for the sponsor's approval. The review process should include a detailed analysis of the proposed scope changes, including their impact on quality, cost, and schedule.

4.9.4 Standard Procurement Documentation

The procurement team expert is expected to follow the established EU guidelines and documentation. The EU representative is responsible for providing the standard procurement documents and templates. The EU representative will review the draft of each document and approve the final document. The procurement team expert will provide the EU with reports on the tender process including bid advertisement, bid opening and evaluations, contract awards, and closure. The standard documents for project procurement will include:

1. Terms of Reference/Scope of Work Template - the TOR includes background, justification, objectives, the scope of works, deliverables, scope activities, duration reporting, qualifications, required resources, gender, and social impact analysis.

2. Instruction to Tenders
3. Request for Proposal Template
4. Request for Quotation Template
5. Budget Guidelines
6. Bidding Documents - Invitation to bid, instructions to bidders, the form of contract, conditions of contract, specifications, relevant technical data, duration, gender, social impact, and appendices.
7. Method of evaluation and criteria
8. Internal Source Selection Evaluation Forms
9. Confidentiality and Transparency Forms
10. Non-disclosure agreement
11. Letter of intent
12. Contract Template
13. Notification and Award of Contract
14. Procurement Performance Evaluation Form

4.9.5 Procurement Approval Process

The rules and principles established by the EU will be used for the procurement approval process. The actions to be undertaken include the following:

1. Using the EU template, complete the Tender documents.
2. Submit completed Tender document to the sponsor via the PSC for approval.
3. Publish Tender.

4. Report of Tender process is submitted to the EU.
5. Impanel the Tender Evaluation Committee (the EU and will sit as observers on the Committee). The committee will comprise five (5) persons selected by the beneficiary.
6. Using the EU's evaluation criteria, the Committee would complete an administrative compliance grid to assess whether or not the submission meets the tender requirements. Once the submission is compliant the bid is open and a review of the technical proposal is undertaken based on a grading scale out of 100 (rationale (2), strategy (40), back up function (10), involvement of members of a consortium (10), timetable of activities (20). The technical proposal must receive an average score of 80 or more for the committee to proceed to open and evaluate the financial proposal. Despite a passing grade for the technical proposal, the Committee can request further information or seek clarification (attached to a specific deadline) on any aspect of the proposal. The least-cost principle is applied to the evaluation of the financial proposal once the applicant provides written justification with supporting documents where necessary for each budget submission, which must be linked to the activities schedule submitted in the technical proposal. Once the financial proposal is deemed satisfactory the bids would be ranked based on scores and the highest-ranked bid will be selected.
7. Once the additional information is received the committee will finalize the winning bid.
8. A report of the Evaluation is submitted to the EU.

9. Notice is prepared and sent to the winning tender.
10. The contract is drafted and submitted to the EU.
11. Approved contract is signed by the sponsor, beneficiary, and service provider
12. The National Procurement Board is provided with all reports and copies of the contracts throughout the life of the project.
13. The sponsor approves any adjustment to the contract terms, including a written justification outlining the project schedule and budget.
14. The use of the contingency funds requires approval by the sponsor.

4.9.6 Procurement Risks and Risk Management

Procurement risk management is a process that anticipates risks and implements a strategy that safeguards the project. From an analysis of the identified procurement risks (inadequate response to the tender advertisement, tender submissions do not meet criteria, shipment delays) based on the RBS, and Risk Register, the risks would have a medium-high impact on the project deliverables. Therefore, during the procurement process, the identified procurement risk has a medium to a high probability of occurrence, which the procurement specialist must continuously access and monitor.

However, there are other procurement-related risks not stated in the RBS and Risk Register, which can affect the implementation of the project. In this regard, the procurement expert will follow the following steps to address these unknown, unidentified risks.

Figure 27.

Unknown and Unidentified Risk Identification Process



Source. Author's own elaboration (2021)

In addition, the procurement expert will apply probability scales and impact analysis structures of the Risk Management Plan, which aims in determining the response measure and cost and schedule implication of each risk.

4.9.7 Procurement Constraints

- Familiarity with the EU Procurement Rules and Procedures
- Cost – increase in the cost of goods and services can result in budget changes i.e. cost overruns.
- Time Constraints for selection of consultants – the duration for the selection of consultants is too short.
- Use of Sole Source Selection - does not allow for competitive pricing.
- Completion of bidding documents to the established and approved standards

4.9.8 Control Procurement

The PMI (2017) describes control procurements as managing procurement relationships monitoring contract performance and making changes and corrections, closing out contracts. The critical inputs into the developing of the monitoring system include the Requirements, Risk (risk register), and Change Management Plans. In this regard, the procurement expert with input from the project manager will manage the control procurement process.

Therefore, the control procurement activities for this project include the following:

- Monitoring the internal and external procurement environment to facilitate adjustments and spot opportunities;

- Gathering, analyzing, and reporting procurement-related project data for the preparation and submission on monthly reports;
- Maintaining project records concerning financial performance;
- Establishing procurement performance indicators; and
- Adjusting as appropriate the procurement plan and schedule.

4.9.8.1 Contract Management

The procurement team expert is responsible for maintaining the contract files for all procurement goods services. Additionally, the procurement team expert is responsible for the continuous monitoring of the contracts to ensure achievement of prescribed deliverables. This process also includes taking account of contract amendments, resolving disputes based on contract terms and conditions, Receiving, processing, and reviewing payments request is also a critical component of this process.

In this regard, each contract file will contain:

1. Original Contract and all amendments
2. All related communication with the supplier (internal and external, hard copy and electronic)
3. Copy of the winning offer
4. Award documents

5. Evaluation Committee's Report
6. Minutes of Meetings with the contractor
7. Notes of phone conversations
8. Invoices
9. Proof of receipt of goods
10. Proof of payment
11. Supplier assessment report
12. Acceptance report for the client

4.9.8.2 Vendor Performance Measure

The procurement team expert is also required to monitor and report on contract performance. Vendor performance management refers to the monitoring and analyzing the quality and reliability of the goods or services procured. Performance reports should address, meeting project scope, actual/projected budget, and schedule. The project manager receives and reviews the performance reports before submitting them to the PSC and sponsors for their comments.

In this regard, Chart 42 establishes the performance criteria and matrix that will be used to measure vendor performance for the procurement activities:

Chart 42.*Procurement Performance Evaluation Template*

Vendor	Product/ service Quality	Delive ry Time	Transactional efficiency	Cost per Unit	Meet product specification/ qualifications	Compliance with negotiated terms
Vendor #1						
Vendor #2						

Source. Author's own elaboration (2021)

Performance key:

- 1 – Unsatisfactory
- 2 – Acceptable
- 3 – Exceptional

4.9.8.3 Contract Closure

Contract closure is concerned with completing and settling all the terms of the contract related to the project. The process for the closure of all contracts for goods and services procured include the following:

1. Confirm that all contract requirements were completed
2. Submit formal acceptance for completed work
3. Complete performance reporting

4. Complete procurement closure – review and ensure that all payments were made to supplier/service provider
5. Review and file completed contract documents
6. Update lessons learned register

The procurement expert will manage the contract closure process in collaboration with the project manager. The PSC and Sponsor must sign off and approve all contract requirements, including the performance report and final payments to the vendor must be met and completed.

4.10 Stakeholder Management Plan

Improve the Capacity of the National Training Agency (NTA) and the Antigua and Barbuda Institute of Continuing Education (ABICE) to Issue National and Caribbean Vocational Qualifications Project

Identification Number: GTA/AB/345/21-22

Prepared By: Barbara Williams, Project Manager

Document Version:

Approved by Project Sponsor: _____

Approved by Beneficiary: _____

Approved by PSC Chair: _____

Date: _____

Abstract: The Stakeholder Management Plan outlines the process and methodology that the project manager and team will utilize to engage, manage, and monitor stakeholder engagements throughout the project life cycle. The plan takes into account the stakeholders' expectations, communication rules, power, interest, and influence on the project deliverables.

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4.10.1 Roles and responsibilities

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4.10.6 Manage Stakeholder Engagement

4.10.7 Control Stakeholder Engagement

The Stakeholder Management Plan outlines the process to identify, plan, manage, and monitor stakeholder engagements. Within this process, the management strategies to effectively engage stakeholders throughout the project's lifecycle were devised based on the project scope, stakeholder needs, influence, and potential project impact. The plan includes a stakeholder analysis that provides critical information to guide all levels of engagement with stakeholders. The effectiveness of this process influences the project schedule, identification of risks, risk response measures, and stakeholder communication strategy.

4.10.1 Roles and Responsibilities

Chart 43 outlines the level of responsibilities from a project oversight level for the Stakeholder Management Plan.

Chart 43.*Stakeholder Roles and Responsibilities*

Role	Responsibility
Project Sponsor	<ul style="list-style-type: none"> • Approve Stakeholder Management Plan • Provide input and advice into the development of the stakeholder engagement strategies. • Participate in public engagements with stakeholders.
PSC	<ul style="list-style-type: none"> • Provide advice on the preparation of the stakeholder engagement strategies. • Participate in public engagements with stakeholders. • Provide advice and review Stakeholder Management Plan. • Assist with the identification and classification of stakeholders. • Support the implementation of the Stakeholder Management Plan.
Project Manager	<ul style="list-style-type: none"> • Identify stakeholders. • Develop the Stakeholder Management Plan. • Conduct initial stakeholder analysis. • Manage Stakeholder Management Plan.

Chart 43.*Stakeholder Roles and Responsibilities (continues)*

<p>Project Team Member (Communications)</p>	<ul style="list-style-type: none"> • Undertake the stakeholder analysis in consultation with the project manager and team. • Draft the Stakeholder Management Plan. • Provide advice and review the Stakeholder Management Plan. • Play a lead role with the identification and classification of stakeholders. • Develop the stakeholder management strategies • Monitor the implementation of the Stakeholder Management Plan. • Provide progress reports to the project manager on the implementation of the Stakeholder Management Plan.
<p>Project Team</p>	<ul style="list-style-type: none"> • Assist with the development of the Stakeholders Management Plan. • Assist with the development of stakeholder management strategies. • Provide information to support the development and implementation of the Stakeholder Management Plan. • Make recommendations to enhance the Stakeholder Management Plan.

Chart 43. <i>Stakeholder Roles and Responsibilities (continues)</i>	
Ministry of Education	<ul style="list-style-type: none"> • Provide information to support the development and implementation of the Stakeholder Management Plan. • Make recommendations to enhance the Stakeholder Management Plan. • Assist with the identification and classification of stakeholders.
ABICE	<ul style="list-style-type: none"> • Provide information to support the development and implementation of the Stakeholder Management Plan. • Make recommendations to enhance the Stakeholder Management Plan. • Assist with the identification and classification of stakeholders.
ABNTA	<ul style="list-style-type: none"> • Provide information to support the development and implementation of the Stakeholder Management Plan. • Make recommendations to enhance the Stakeholder Management Plan. • Assist with the identification and classification of stakeholders

4.10.2 Stakeholder Management Process

The stakeholder management process was developed based on inputs from the approved concept paper, the Project Charter, and the Scope Management Plan.

Other inputs towards the articulation of this process were obtained from interviews,

stakeholder surveys, expert judgment, and desk research. Therefore, the stakeholder management process takes account of the following:

- **Identify Stakeholders** – identify the people, groups, and organizations with significant influence on the project or are affected by its implementation.
- **Plan Stakeholder Management** – identify the strategies and mechanisms that will achieve the greatest support of stakeholders and minimize resistance.
- **Manage Stakeholder Engagement** – outlines the processes and steps to carry out the planned strategies.
- **Control Stakeholder Engagement** – describes the methods to monitor stakeholder engagements.

4.10.3 Identify Stakeholders & Analysis

The identification and analysis were undertaken by the lead expert on the project team that is responsible for communications. Existing documents such as the Project Charter, the approved concept note were used to identify the project stakeholders. Additionally, brainstorming and surveys were also used as part of the process of identifying and analyzing the influence, impact, level of engagement, and method of communication for each stakeholder.

Therefore, the below Stakeholder Register (Chart 44) identifies the key project stakeholders and comprehensive analyses of their impact. Additionally, the Stakeholder power and interest grid shown in Chart 45, provides a strategic position on managing the identified stakeholders, that determines which group of stakeholders possesses the greatest risks to the project based on their impact.

Chart 44.*Project Stakeholder Register*

Stakeholder Register							
Identification Information				Stakeholder Analysis			
No	Name	Role	Contact Information	Influence (H, M, L)	Impact (H, M, L)	Level of Engagement	Method of Communication
1	ABICE	Educator & Trainer	Director abice@ab.gov.ag	H	H	Supportive	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
2	ABNTA	Educator & Trainer	Executive Director abnta@ab.gov.ag	H	H	Supportive	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
3	Ministry of Education	Policy	Director of Education clarebrowne@ab.gov.ag	H	H	Supportive	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
4	Ministry of Finance	Finance Management	Financial Secretary HarrisW@ab.gov.ag	H	M	Supportive	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
5	Contractors Association	Service provider	President JenkinC@gmail.com	H	H	Supportive	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
6	Plumbers Association	Service provider	President HillBaldwin@gmail.com	H	H	Supportive	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
7	Hotels & Tourist Association	Service provider	Executive Director ABHTA@candw.ag	H	H	Supportive	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
8	Auto-body & Mechanic	Service provider	President DeFreitasV@gmail.com	H	H	Supportive	Status Reports, Emails, Face-to-Face Meetings, Media

Chart 44.*Project Stakeholder Register*

Stakeholder Register							
Identification Information				Stakeholder Analysis			
No	Name	Role	Contact Information	Influence (H, M, L)	Impact (H, M, L)	Level of Engagement	Method of Communication
.	Association						presentations, online project meetings, Focus Groups Meetings
9	Secondary School Students	Trainees	Provided through project contacts	M	M	Supportive	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
10	Trinidad & Tobago Technical Training Agency	Consultants & Trainer	Executive Director T&TTEVET@tt.gov.edu	H	H	Supportive	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
11	Local Media Partners	Information dissemination	ABS Observer News ZDK Radio	M	H	Neutral	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
12	Barbara Williams	Project Manager	BarbaraN.Williams@ab.gov.ag	H	H	Supportive	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
13	Jeneatte Mason	Education Officer	MasonJ@ab.gov.ag	M	M	Supportive	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
14	Cassey Roberts	Education Quality Assurance Officer	Cassey.Roberts@ab.gov.ag	H	H	Supportive	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
15	Ministry of Information and	Information communication technology	Director of IT Services Diggs.James@ab.gov.ag	M	M	Supportive	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project

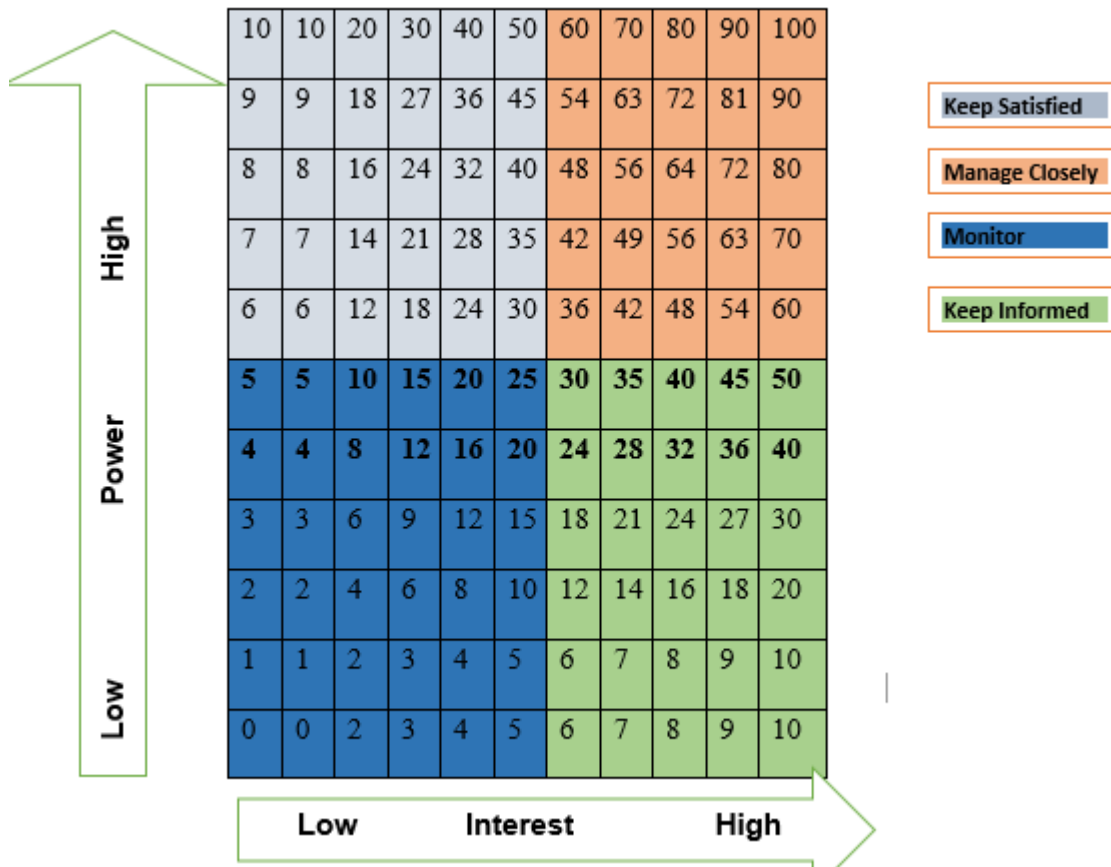
Chart 44.							
<i>Project Stakeholder Register</i>							
Stakeholder Register							
Identification Information				Stakeholder Analysis			
No	Name	Role	Contact Information	Influence (H, M, L)	Impact (H, M, L)	Level of Engagement	Method of Communication
.	Technology	expert					meetings, Focus Groups Meetings
16	European Union	Funder	Head of Delegation LuisM@eu.europa.com	H	H	Supportive	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
17	Assessors	Trainers	Refer to project directory	H	H	Supportive	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings
18	Verifiers	Trainers	Refer to project directory	H	H	Supportive	Status Reports, Emails, Face-to-Face Meetings, Media presentations, online project meetings, Focus Groups Meetings

Source. Author's own elaboration (2021)

4.10.4 Stakeholder Power & Interest grid

The stakeholder identification and analysis were used as the primary input into developing the stakeholder power and interest grid. The grid was developed to identify the most influential and most impacted stakeholder. The information from the grid provides the project team with critical information to properly identify the most appropriate engagement strategy for each stakeholder group. Based on the grid in Chart 45 the stakeholders with the highest influence should be provided with weekly updates and participate in pre-identified project information activities, workshops, and conferences. The stakeholders with the highest power and influence should receive daily updates and personal contact on the project progress. Therefore, the communication experts and the project manager is required to keep all project stakeholders engaged and informed about the project.

Chart 45.

Stakeholder Power & Interest Grid

Source. Author's own elaboration (2021)

4.10.5 Stakeholder Engagement

An interactive and inclusive stakeholder engagement plan will be developed for this project. The stakeholder register, results of the stakeholder analysis, and the power and interest grid would be used as the primary inputs to build the Stakeholder Engagement Plan. The plan is a critical component of the Stakeholder

Management Plan since it provides stakeholders with information on the project scope and overall implementation. Additionally, the stakeholder engagement plan will benefit from the results of a stakeholder survey to determine their needs and expectations. The prioritization of stakeholders' power, interest, and influence is another critical input that will aid in the development of the engagement strategy and actions. Therefore, the stakeholder engagement strategy includes the following steps, as depicted in the diagram below.

Figure 28.

Stakeholder Engagement Strategy



Source. Author's own elaboration (2021)

4.10.6 Manage Stakeholder Engagement

According to PMI (2017), the manage stakeholder engagement includes the process of communicating and working with stakeholders to meet their needs/expectations, address issues as they occur, and foster appropriate stakeholder engagement in project activities throughout the project life cycle. This process allows the project manager to keep stakeholders informed about the project status, and minimize resistants from key project stakeholders.

The goal of the stakeholders priority map is to identify project allies and potential opposition to create effective strategies for working with both types of stakeholders. Identifying supportive and non-supportive stakeholders helps the project manager and team to advance specific strategy to address potential conflicts and priorities of stakeholders. Therefore, stakeholder engagement will be guided by the following key questions to ensure the use of the most appropriate communication tool.

- What is their interest in the project?
- How can they influence project success?
- What is the role of each stakeholder?
- How would each stakeholder benefit from the project?

Based on the stakeholder categorization and priority level, the project team will give each stakeholder includes the following:

- **High Influence, Low Interest:** Document reviews and reports, targeted alerts, face-face engagements, meetings, email alerts, monthly reporting, social media tools (Facebook, Instagram, tweets).
- **High Influence, High Interest:** Document reviews and reports, targeted alerts, face-face engagements, meetings, email alerts, monthly reporting social media tools (Facebook, Instagram, tweets).
- **Low Influence, Low Interest:** information updates using social media tools (Facebook, Instagram, tweets).
- **Low Influence, High Interest:** Discussion forums, online surveys, formal consultations, reporting, email alerts, social media tools (Facebook, Instagram, tweets).

Additionally, given the wide national impact of the project, the project manager and team under the leadership of the communications expert will engage in several social media campaigns, messaging, radio, and video announcements to reach and communicate with stakeholders. The use of the online methods would allow for continuous daily communication with stakeholders about the overall project scope and status.

4.10.7 Control Stakeholder Engagement

Control Stakeholder engagement is the process of monitoring the overall project stakeholder relationships and making adjustments to the strategies and

plans for engaging stakeholders. The control stakeholder engagement involves the collecting of data and assessing the impact of the stakeholder engagement strategy. The results of the analysis would be used to make adjustments to the plan and engagement actions. The Stakeholder Management plan would form part of the reporting requirements for the lead project team experts, which would be updated based on feedback from the project stakeholders, the PSC, and the sponsor. The updating of the plan follows the project's change management process and steps, with the documentation of approved changes to the plan. Therefore, reporting on the implementation of the Stakeholders Management Plan, particularly the inputs from the stakeholder mapping and analysis, are the primary basis upon which the plan would be evaluated and updated.

5 CONCLUSIONS

1. The general objectives of the project were to develop a comprehensive PMPlan for the project entitled, ***“To improve the capacity of the National; Training Agency and ABICE to issue national and Caribbean Vocational Qualifications”***. The project enables the ABNTA and ABICE to work together to advance the national TVET framework. The PMPlan utilized the standard practices established in the PMBOK to articulate a series of activities and actions that would achieve the project’s objectives. The project’s results positively influence the organizational structure and values of the ABNTA and ABICE by addressing its capacity development constraints to fulfill its TVET training and certification mandates.
2. The Project Charter is the starting point of any project. It formally authorizes the start and approval of the project, and establishes its baseline. A well-defined Charter ensures that the project manager and team understand the needs and requirements of the project. Therefore, the Project Charter is the reference document to understand how the project aligns with the organizational strategies.
3. Developed during the planning phase, a well-defined project scope typically involves identifying everything needed to establish the framework of the project. The Scope Management Plan summarizes the project’s parameters and help the project team to stay close the project objectives and

deliverables throughout its lifecycle. The development of the project scope is a critical aspect of the project, since it forms the basis of good decision-making and establishes control factors to address change, communication modes, schedule, resources, labour, cost, project requirements, and stakeholder engagements.

4. Managed throughout the project's lifecycle, the Schedule Management Plan establishes a set of guidelines and procedures for developing, managing, executing, and controlling the project schedule. The project schedule spans 341 days commencing May 10, 2021 – September 10, 2022 and outlines the start and end dates for the overall project including each project task. The schedule also highlights the milestone actions and the timeframe for their completion. Based on the project calendar there are 14 non-working days for the project and take place within a forty-hour workweek for 9 hours per day. The development of the project schedule is critical for the implementing the Resources Management and Procurement Plans to ensure alignment with the project activities and objectives.
5. The development of the Cost Management Plan requires precision and accuracy with the creation of the project budget. The plan establishes the cost baseline per activity based on the WBS. To this end, the plan shows the expected cost of the project, and highlights the process and procedures for the monitoring and controlling cost. Funded by a grant of \$1,540,000 from the EU. Additionally, strict reporting and approval mechanisms have been established based on the EU rules, regarding particularly the

disbursements and use of the contingency funds. Consequently, the policies and procedures for tracking, reporting, and measuring project cost follow the principles established by PMI in the PMBOK.

6. Another critical aspect of the project's success is its quality assurance and acceptance criteria of the deliverables. Quality management allows the project manager and team to establish the policies and procedures to define the quality requirements and control mechanisms. The project's, quality assurance requirements incorporate the approved CVQ training and certification guidelines for the stated training areas covered by the project, including the TVET assessment levels. Similarly, the quality criteria also extend to the professional skills of the training experts, content, and equipment. Therefore, the project lifecycle incorporates the quality management approaches, actions, and strategies that support the achievement of the deliverables. .
7. The purpose of the Resource Management Plan is to allocate all the necessary resources to achieve the project deliverables. The resources for the project cover labour, equipment, finances, and technology. The development of the Resources Management Plan is vital all aspects of the PMPlan, particularly the Cost, Procurement, Quality, and Schedule Management Plans. The plan's development allows for the efficient allocation, utilization, and leveling of the project resources to achieve the project's objectives. The resource allocation for the project allows assigning

resources along the work packages identified in the WBS. Therefore, the resource requirements cover the project's technical, operational, equipment, and personnel needs.

8. The Communication Management Plan ensures that the project provides credible, relevant, and consistent information to all project stakeholders. It identifies the media through which information is communicated to the team members, stakeholders, and sponsor. Additionally, it outlines the frequency, type, and receiver of the messages related to the project while establishing the communication protocol, policies, and procedure for the project. The plan details and takes account of the stakeholder requirements and expectations. Effective communication practices and processes help the project team to communicate the project objectives and provide status updates on the project's progress.

9. The Risk Management Plan is an integral part of the PMPlan and contributes to the project's success. It includes an analysis of the internal and external risks for the project and establishes the framework for identifying risks and determining the probability of occurrence and impact on the project schedule, cost, and quality. The project uses a probability and impact matrix to assess the likelihood of occurrence for each identified risk. Based on the Pxl risks of 0-6 should be monitored, 7-10 implement risk response strategy, 11-25 reduce or avoid. Therefore, the development of the Risk Management Plan helps the project manager and team assess the

project risks and make effective decisions concerning the project's overall implementation.

10. The Procurement Management Plan defines the external needs of the project. This plan works together with the quality management plan, which sets the technical specification and standards for the procured items. Additionally, the procurement plan also works together with the cost, schedule, and resources plan, setting the implementation baseline. The plan takes account of the procurement constraints, risks, performance, and vendor management requirements. In this regard, the plan outlines the project procurement policies and guidelines, incorporating the EU procurement procedures. Further, it outlines a methodological framework for evaluating performance against defined procurement objectives.
11. The Stakeholder Management Plan documents the approach and methodology to engage, manage, and monitor stakeholder engagements throughout the project lifecycle. It identifies the key project stakeholders, their level influence and impact, and the method of communication for each stakeholder. The Stakeholder Management Plan carefully defines the process of stakeholder engagements and the most efficient approaches of communicating with the internal and external stakeholders to ensure efficient communication of the project's objectives and progress.

6 RECOMMENDATIONS

The general objective of this project was to develop a comprehensive PMPlan for the ABNTA and ABICE for a project to improve their capacity to issue national and Caribbean Vocational Qualifications. The recommendations stated in this section will guide the beneficiary, particularly the ABNTA and ABICE.

1. This project is the first capacity-building training project for both the ABNTA and ABICE. Therefore, the beneficiary agencies should maintain the Project Charter and Scope Management Plan as critical guiding documents for the management and monitoring of the project, as it increases the likelihood of success.
2. Given that there is no formal documented process and procedures at both organizations, the executive management should establish internal mechanisms for cataloging information generated from all phases of the project. The collated information forms part of the environment process assets of the organizations, which becomes inputs for the development, and management of future projects. Consequently, the Lessons Learnt Register, the Performance Measurement, and Review Reports would form part of the information that to be collated from the project.

3. The project duration is 341 days to complete the stated project deliverables based on its objectives. Notably, the beneficiaries must pay keen attention to the project milestones based on the schedule. In this regard, the beneficiaries should keep under review the issues relating to the dependencies, leads, and lags, since any slippage of the project activities would increase the overall implementation time. If the project falls behind by 15-30 days the beneficiary with the sponsor's approval could compress the schedule and/or the procurement activities to recover lost time. There, however, could be implications for the project cost, which would require a review of the cost baseline.
4. The project focuses on education, training, and infrastructural development of ABICE & ABNTA. Maintaining quality assurance and quality control is key to the project's success. Therefore, conducting the validation of the project at the beginning and end of each project phase ensures that the quality requirements are adhered to. On the other hand, poor quality assurance affects the reliability of the certification issued including the competence, knowledge, and skills of the trainees.
5. The project's external resources provide the core technical expertise for the implementation of the project. The beneficiaries should align themselves to capture and receive the transfer of knowledge that would build their internal professional capacity. This approach assists with sustaining the results from the project and expands their knowledge base and competencies.

6. One of the high-level risks identified in the Risk Management Plan relates to the teaching content and knowledge of the trainer. Therefore, to protect the credibility of the ABNTA and ABICE as trusted learning institutions, the beneficiary must ensure that the range of the teaching materials and qualifications of the trainers are in line with established sectoral standards and practices. Therefore, the quality assurance framework must be robust to detect any anomalies in the selection process for the technical experts.

7. To develop a skilled and highly competent workforce, the beneficiary organization must establish a communication framework that informs and provides reliable information on the training opportunities to its stakeholders. Additionally, a valuable aspect of the communication system is the continued assessment of the training needs of its stakeholders. Thus, implementing a robust communication framework would help the beneficiaries sustain and build on the results of the project. Therefore, the project's communication framework and requirements are important areas of the Communication Management Plan that the beneficiaries should document.

8. For the development of future projects, the beneficiaries would benefit from the structure, and results of the stakeholder engagement aspect of the plan. The results of the project provide best practice strategies and process that

are transferable to other projects. Therefore, it builds the beneficiaries intellectual capacity as it relates to the use of tested stakeholder engagement tools, techniques, and requirements.

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8 APPENDICIES

Appendix 1.

FGP Charter

PROJECT CHARTER	
(Formalizes the project start and confers the project manager with the authority to assign company resources to the project activities. Benefits: it provides a clear start and well-defined project boundaries)	
Date:	Project Name:
May 10th, 2021	To develop a Project Management Plan to improve the capacity of the National Training Agency (NTA), and the Antigua and Barbuda Institute of Continuing Education (ABICE) to issue National and Caribbean Vocational Qualifications.
Knowledge Areas / PM Processes:	Application Area (Sector / Activity):
<p><u>Knowledge Areas:</u></p> <ol style="list-style-type: none"> 1. Project Integration Management 2. Project Scope Management 3. Project Schedule Management 4. Project Cost Management 5. Project Quality Management 6. Project Resource Management 7. Project Communication Management 8. Project Risk Management 9. Project Procurement Management 10. Project Stakeholder Management 	The project sector is education and training.
Project Start Date: May 10 th , 2021	
Project Finish date: November 19 th , 2021	
Project Objectives (General and Specific):	

General Objective:
To develop a Project Management Plan for the National Training Agency, and the Antigua and Barbuda Institute of Continuing Education for a project to improve their capacity to issue National, and Caribbean Vocational Qualifications.
Specific Objectives:
1. To create a Scope Management Plan to ensure the inclusion of all work necessary for the completion of the project.
2. To create a Schedule Management Plan for the on-time execution of the project within the established timeframe.
3. To create a Cost Management Plan to define the processes for the development and approval of the budget.
4. To create a Quality Management Plan to identify and include the quality requirements to meet stakeholders' expectations.
5. To create a Resource Management Plan to identify, acquire, and manage all resources needed for the completion of the project.
6. To create a Communication Management Plan for the effective communication of the project status to stakeholders, and sponsor.
7. To create a Risk Management Plan to identify, and evaluate project risks, and to develop risk response, and mitigating measures.
8. To create a Stakeholder Management Plan to identify key project stakeholders and engagement mechanisms.
9. To create a Procurement Management Plan to obtain the products, and services necessary for the execution of the project.
Project purpose or justification (merit and expected results):
<p>The advancement in technology and the modernization of the workplace due mainly to increase global competition has created a demand for a skilled, and adaptable workforce. To this end, the Government of Antigua and Barbuda recognized the need to enhance the human resources capacity of the country by improving the quality of skilled labour. It has been widely recognized that there is a shortage of skills in key areas of the economy, which have affected its economic development, and ability to respond to the labour market demands at various levels of society. The labour market gaps have been linked to not having a well-resourced training system that can adequately respond to demands at the secondary, tertiary, and vocational levels.</p> <p>Thus, the implementation of this project will streamline, and establish an operational framework whereby the NTA, and ABICE can work together to promote, coordinate, and manage the technical vocational training system. This will ensure an adequate supply of trained employees for national development in areas relating to the national training needs, and other regional commitments through the implementation of the CARICOM Single Market and Economy (CSME).</p> <p>Additionally, the resources provided under this project will assist in closing an existing developmental gap, which has constrained the labour force and hindered the mobility of nationals to capitalize on employment opportunities at the national and regional levels. Within a competitive marketplace, there is an increasing demand for expertise, and a</p>

high-quality workforce in various fields can increase the availability of professional skills, and expertise in the market. Therefore, this project aims to develop the TVET programme as an important strategy to promote economic development, expand the labour market, and improve the quality of employment.

Description of Product or Service to be generated by the Project – Project final deliverables:

The development of the Project Management Plan, which incorporates the ten project knowledge areas. The Plan will focus on executing actions that will enable the NTA, and ABICE to improve their capacity to issue National and Caribbean Vocational Qualifications.

Assumptions:

1. The project is completed within the stipulated period.
2. The review and feedback of the project deliverables would be done promptly.
3. The project receives adequate resources.
4. The project is implemented within budget.
5. The project will receive full support from the sponsor.
6. The project scope and requirements will not change.
7. The key stakeholders will participate in the project.
8. The student has a full understanding of the requirements for the FGP.
9. The requirements for the FGP will remain unchanged.
10. It is assumed that sufficient and reliable support will be provided to the student to complete the FGP.

Constraints:

1. Scope - the project scope could change throughout the project lifecycle.
2. Schedule - not enough time is allotted to complete the project.
3. Cost - the budgeted amount to complete the project is unrealistic.
4. Quality - the quality requirements could be impacted by the change in project scope, cost, and schedule.
5. Resources - insufficient resources allocated for the completion of the project.

Preliminary Risks:

Cause

	Effect	Impact
Insufficient time to complete the project.		
Inadequate access to information for the development of the project.	The student fails to complete the project and fails the FGP.	Scope, Schedule, Cost, and Quality
Non-approval of deliverables.	Deliverables are poorly articulated and referenced.	Scope, Schedule, and Quality
Failure to manage stakeholder engagements.	The student fails to complete the project and fails the FGP.	Scope, Schedule, Cost, and Quality

Failure to make corrections promptly.	Stakeholders may not derive the full benefits of the project or meet their needs.	Scope, Schedule, Cost, and Quality
Failure to identify all project requirements.	The inability of the Tutor to provide timely responses.	Scope, Schedule, and Quality
Limited understanding of the project's requirements.	Delay in submitting deliverables, and achieving key milestones.	Scope, Schedule, Cost, and Quality
Inadequate resources to complete the project.	Deliverables poorly articulated and fail to meet stipulated requirements.	Scope, Schedule, Cost, and Quality
No communication about project deliverables.	Deliverables and project requirements not achieved.	Scope, Schedule, Cost, and Quality
Late submission of deliverables.	Insufficient time to communicate key project updates, and to seek approvals.	Scope, Schedule, Cost, and Quality
Comments and corrections not submitted promptly by Tutor.	Student fails the Final Graduation Project.	Scope, Schedule, Cost, and Quality

Budget - The budget will constitute the resources required to complete and receive approval of the FGP.

Milestones and dates:

Milestone		
Project Charter	Start date	End date
WBS	May 10th, 2021	May 16th, 2021
Corrections	May 10th, 2021	May 16th, 2021
Chapter 1: Introduction	May 10th, 2021	May 24th, 2021
FGP Schedule	May 17th, 2021	May 30th, 2021
Corrections	May 17th, 2021	May 23rd, 2021
Chapter II: Theoretical Framework	May 24th, 2021	May 30th, 2021
Corrections	May 24th, 2021	May 30th, 2021
Chapter III: Methodological Framework	May 31st, 2021	June 6th, 2021
Corrections	May 31st, 2021	June 6th, 2021
Annexes	June 7th, 2021	June 13th, 2021
Bibliography	June 7th, 2021	June 13th, 2021
Schedule	June 7th, 2021	June 13th, 2021
Signed FGP Charter	June 14th, 2021	June 27th, 2021
Graduation Seminar Approval	June 14th, 2021	June 13th, 2021

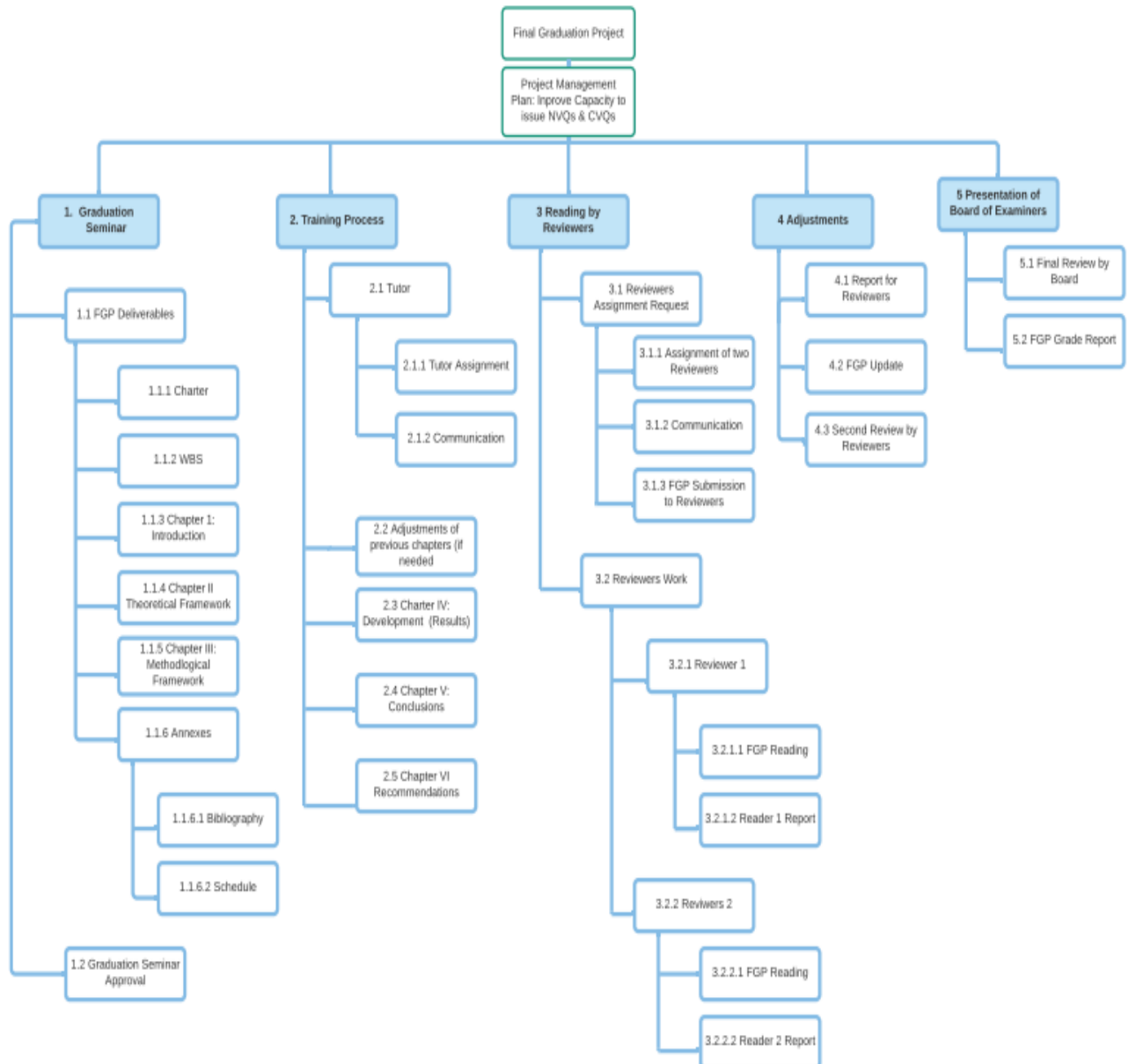
Tutor Assignment	June 21st, 2021	June 27th, 2021
Communications	June 28th, 2021	July 4th, 2021
Adjustments of previous chapters (if needed)	June 5th, 2021	July 18th, 2021
Chapter IV: Development (Results)	June 12th, 2021	July 25th, 2021
Chapter V: Conclusion	July 26th, 2021	September 31st, 2021
Chapter VI: Recommendations	October 1st, 2021	October 3rd, 2021
Assignment of Reviewers	October 4th, 2021	October 7th, 2021
Communications	October 8th, 2021	October 10th, 2021
FGP Submission to Reviewers	October 11th, 2021	October 13th, 2021
FGP Reading - Reviewer 1	October 14th, 2021	October 14th, 2021
Reviewer 1 Report	October 15th, 2021	October 20th, 2021
FGP Reading Reviewer 2	October 20th, 2021	October 23rd, 2021
Reviewer 2 Report	October 2nd, 2021	October 23rd, 2021
Report for Reviewers	October 27th, 2021	October 29th, 2021
FGP Update	October 29th, 2021	October 29th, 2021
Second Review by Reviewers	October 30th, 2021	November 3rd, 2021
Final Review by Board	November 5th, 2021	November 9th, 2021
FGP Grade Report	November 10th, 2021	November 10th, 2021
Closing of FGP	November 13th, 2021	November 19th, 2021
Relevant historical information:	November 19th, 2021	November 19th, 2021

The Antigua and Barbuda Training Agency were created by an Act of Parliament, which stipulates the major functions of the Agency, including developing the national systems for training, certification, and accreditation of workers. On the other hand, the Antigua and Barbuda Institute of Continuing Education caters to persons sixteen years, and older public, and private sector employees who are desirous of pursuing a skilled trade. The NTA and ABICE work together with the understanding that one is the training arm and the other is responsible for certification within the national vocational infrastructure. To this end, the NTA is responsible for setting the standards for the vocational qualifications that are to be used at ABICE. In this regard, the NTA cannot function nor complete its mandate without the direct involvement of ABICE. Therefore, the role of both organizations is to develop the workforce through training which leads to the awarding of NVQs, and CVQs in the desired area of specialization. With the implementation of the National TVET Policy, both organizations are required to implement the focus actions to close the national skills, and certification gaps, which fulfill the national education, and development objectives.

Stakeholders:	
<u>Direct stakeholders:</u>	
<ol style="list-style-type: none"> 1. Course Facilitator 2. Board of Examiners 3. Reviewers 4. Barbara Williams (Student) 5. Global School of Project Management (University of International Corporation) 6. Government of Antigua and Barbuda 7. National Training Agency 8. Antigua and Barbuda Institute of Continuing Education 	
<u>Indirect stakeholders:</u>	
<ol style="list-style-type: none"> 1. Academic Assistant 2. Future Cohorts of the Project Management Master's Program 3. Academic Assistant 4. Classmates 5. Work Colleagues and Office 	
Approval:	
Project Manager: Barbara N Williams	
Authorized by: Mr. Carlos Brenes	Signature: <i>Barbara Williams</i>
	Signature:

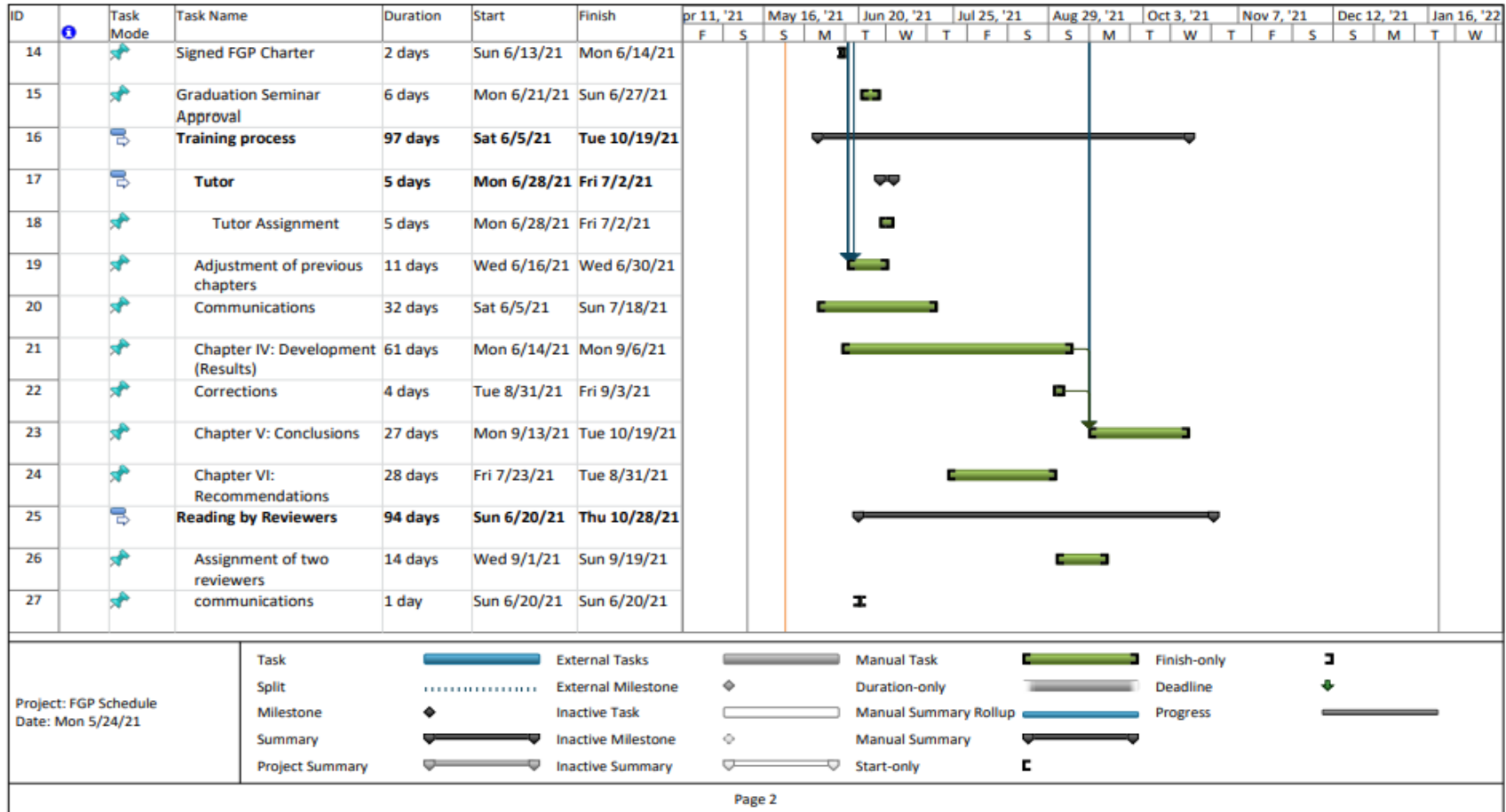
Appendix 2.

FGP WBS



Appendix 3.

FGP Schedule



Appendix 4.*Revision Dictum*

Heathea Cabral
Yorks Extension
St. John's Antigua

November 18th, 2021

To Whom It May Concern,

I hold a Masters of Science Degree in International Trade Policy and a Bachelors of Arts in Spanish with Management Studies from the University of the West Indies. I am a certified Spanish translator of documents and I teach Spanish As a Second language to English speakers.

Professionally, I am a Project Development and Research Officer, where I am responsible for the development, management and monitoring of projects across various disciplines.

I have reviewed Ms. Barbara Williams Final Graduation Project for grammar and mechanical errors. Recommendations were made on the overall improvement of the paper in relation to the sentence structure, clarity, and logical presentation.

The paper was well developed based on the project management principles. Sound analysis was applied to the theoretical, methodological and results aspects of the paper.

Sincerely,



.....
Ms. Heathea Cabral BA, MSc.

Appendix 5.

Philologist Credentials

<p>ILEATHEA VIOLA SHANTEL CABRAL</p> <p>York's Extension St. John's, Antigua Tel: 721-1341 Email: ileathea.cabral@ab.gov.ag</p>	<p>PROFESSIONAL SUMMARY</p> <p>Results- oriented Project Development and Trade Officer with sound knowledge various bilateral, regional and multilateral trading arrangements, possess knowledge in project proposal preparation, design and management. Additionally assists in the formulation of policy briefs, reports and cabinet submissions CARIFORUM, CARICOM and EU matters.</p>
<p>SKILLS</p> <ul style="list-style-type: none"> • Proven track record of delivering results under strict deadlines. • Excellent organizational, analytical and strategic thinking skills. • Excellent communication and interpersonal skills. • Ability to fluently communicate in Spanish. • Proficiency in the use of Microsoft Office programmes particularly Word, Excel, Publisher, Projects and Microsoft PowerPoint. <p>EDUCATION</p> <p>University of the West Indies Open Campus Antigua • 2019 <i>Professional Certificate: Project Management</i></p> <p>University of the West Indies Barbados • 2018 <i>Master of Science: International Trade Policy</i></p> <p>Universidad Metropolitana De Ciencias De Ensenanza Chile • 2013 <i>Diploma: Teaching Spanish As A Second Language</i></p> <p>University of The West Indies Barbados • 2011 <i>Bachelor of Arts: Spanish With Management Studies</i></p> <p>Antigua State College Antigua • 2007 <i>Associate's Degree: Humanities</i></p> <p>Princess Margaret Secondary Antigua • 2005 <i>Diploma: General Studies</i></p>	<p>WORK HISTORY</p> <p>Office Of The National Authorizing Officer <i>- Project Development and Trade Officer St. John's 2018 – Current</i></p> <p>Department Of Immigration <i>- Immigration Officer (2016 – 2018)</i></p> <p>Self <i>-Spanish Translator (2012- present)</i> <i>- Tutor (2013- present)</i></p> <p>Trinity Academy <i>- Teacher (2011 – 2015)</i></p> <p>NCO Financial <i>- Customer Service Representative (2011)</i></p> <p>Stanford International Bank <i>- Customer Service Representative (2008)</i></p> <p>AFFILIATIONS</p> <ul style="list-style-type: none"> • Chairperson of the Wellness Committee, Lion's Club of Antigua • General Secretary, Antigua and Barbuda Fencing Federation <p>REFERENCES</p> <p>Ambassador Dr. Clarence Henry National Authorizing Officer, Trade Coordinator And Antigua and Barbuda's Ambassador to CARICOM Ministry of Trade Tel: 268- 764- 0009</p> <p>Mr. Joel Richards Senior Technical Specialist - Trade Permanent Delegation of the Organisation of Eastern Caribbean States to the U7 and other International Organisations in Geneva Tel: +41782148383</p>

